
INDEX

MEASUREMENT TECHNIQUES

Numbers 1-12, 1969



MEASUREMENT TECHNIQUES

Numbers 1-12, 1969

(A translation of Izmeritel'naya Tekhnika)

A

Abramov, V. M. - 140
 Abramzon, É. L. - 1341
 Abrosimov, É. A. - 654, 1638
 Adadurova, M. A. - 726, 1437
 Afanas'ev, S. S. - 221
 Afanas'eva, N. I. - 1071
 Agbalyan, Yu. G. - 1723
 Ageev, S. M. - 1315
 Akhmadeev, M. G. - 969
 Akhmatov, A. S. - 583
 Akhremchik, I. V. - 783
 Akimov, Yu. A. - 1075
 Akkuratnova, N. A. - 1002
 Albul, V. I. - 409
 Aleksandrov, A. M. - 37
 Aleksandrova, A. N. - 783
 Alekserov, S. A. - 1273
 Aliev, A. O. - 1594
 Almazov, I. A. - 1026
 Al'perin, L. N. - 1591
 Amatun, A. N. - 1793
 Ambrok, G. S. - 1207
 Amlinskii, L. Z. - 972
 Andreev, A. I. - 315
 Andreev, V. M. - 107
 Andreev, V. S. - 366, 1411
 Andreeva, L. I. - 1273
 Anishchenko, T. N. - 541
 Antipov, A. F. - 729
 Arakelyan, A. M. - 1548
 Arapov, P. P. - 1262
 Armenskii, E. V. - 836
 Arsenin, V. Ya. - 101
 Arshanskii, B. É. - 328
 Arslambekov, V. A. - 701
 Arutyunov, V. O. - 300, 1182
 Ashcheulov, N. K. - 1187
 Ashkerov, Yu. V. - 583
 Astrov, D. N. - 45, 352, 1693
 Avdulov, A. N. - 1064
 Azizov, A. M. - 164

B

Bakhmutskiĭ, V. F. - 1295
 Bakhtadze, Sh. N. - 597

Balashov, M. E. - 1135
 Banket, V. L. - 911
 Baranov, V. G. - 409
 Barash, V. Ya. - 273
 Barkov, L. A. - 1029
 Barskii, R. G. - 117
 Bartosh, Yu. - 1280
 Bashaleishvili, D. I. - 1330
 Belevtsev, A. T. - 88
 Belik, V. G. - 972
 Belikov, V. A. - 1714
 Belyanskiĭ, L. B. - 45, 352
 Benevol'skii, A. S. - 233
 Berest, A. A. - 1039
 Berezin, P. - 717
 Berg, - 1468
 Berklaid, I. M. - 1659
 Berliner, M. A. - 551
 Berlovskii, A. Ya. - 833
 Bezikovich, A. Ya. - 597, 799
 Bezprozvannyĭ, B. S. - 366
 Blanter, B. É. - 790
 Blinov, V. V. - 1075
 Bocharov, V. A. - 1351
 Bokarev, N. A. - 842
 Bokhan, N. I. - 1031
 Bokrinskaya, A. A. - 1483
 Boltyanskii, A. A. - 522
 Bondareva, A. P. - 1428
 Borovskikh, L. P. - 978
 Borzykh, V. E. - 1501
 Bortnikov, Yu. S. - 1493
 Borzov, V. M. - 513, 804
 Boyarskii, L. A. - 214
 Brainin, Yu. I. - 321
 Britvan, V. Ya. - 1424
 Bronyukaitis, R. K. - 1759
 Bulgakov, V. B. - 1421
 Burdun, G. D. - 682
 Buzinov, V. S. - 1706
 Bychkov, O. D. - 1056
 Bykhovskii, Yu. S. - 191, 903

C

Chapliĭ, V. I. - 1493
 Charikhov, L. A. - 1378

Chechurina, E. N. - 1223
 Chedzhemov, G. Kh. - 400
 Chel'kis, F. Yu. - 1268
 Chelpanov, I. B. - 306
 Chernousova, N. N. - 226
 Chertovskikh, A. N. - 483
 Chervinskii, P. P. - 1121
 Chevela, O. V. - 332
 Chibrikov, V. G. - 747
 Chikhalov, V. S. - 633
 Chunin, B. A. - 276
 Churilov, L. N. - 1068
 Chvertkhn, E. I. - 147

D

Dadashev, R. S. - 1235
 Dadeshidze, V. V. - 1640
 Daich, A. R. - 833
 Dal'skii, A. M. - 122
 Danilevich, F. M. - 622
 Degryaev, A. M. - 1495
 Demenkov, A. A. - 706
 Denisenko, A. N. - 1396
 Derevyanko, N. F. - 505
 Derevyanko, V. E. - 1431
 Dertev, A. N. - 1008
 Devdariani, I. V. - 1555
 Didenko, K. I. - 81
 Dmitrev, A. M. - 1031
 Dmitrichenko, S. S. - 452
 Dmitriev, V. N. - 787
 Dokinskii, E. F. - 1202
 Dolinskii, E. F. - 6
 Dorodnov, V. M. - 271
 Drichko, A. F. - 693
 Drobyshev, Yu. P. - 1647
 Drozdov, M. M. - 438, 1078
 Drozhbin, Yu. A. - 1075
 Druker, Z. I. - 856
 Druzhinina, I. P. - 1090
 Dubov, B. S. - 1755
 Dudich, I. I. - 1295
 Dudnik, R. L. - 679
 Dunin-Barkovskii, I. V. - 774, 876
 Dureiko, G. V. - 440
 Dyuzhin, A. T. - 1505

Dzhagupov, R. G. - 1034, 1321
Dzhelepov, B. S. - 1242
Dzyubenko, I. V. - 1541

E

Efremov, Yu. P. - 1478
Efremova, R. I. - 214
Egorov, B. N. - 1375
Egorov, V. K. - 1426
Egorychev, L. P. - 385
Éidinov, V. Ya. - 699, 925
Elin, A. V. - 994
Elinin, L. M. - 1149, 1432
Emel'yanov, B. A. - 321
Emel'yanov, N. K. - 998
Épshtein, T. M. - 1619
Eremenko, A. S. - 132
Eremin, A. P. - 355
Érvals, A. V. - 1017
Eryukhin, A. V. - 489, 793
Éskin, S. P. - 597, 799, 811, 1512
Étingof, M. I. - 625
Étsin, I. Sh. - 1673
Evgen'eva, L. N. - 1068
Evlasov, S. E. - 942
Evstyunina, L. I. - 838

F

Fainerman, I. D. - 711
Faradzhev, I. A. - 1064
Fedorin, V. P. - 822
Fedorovskii, M. L. - 756
Fedosov, P. - 1468
Fedotov, A. I. - 321
Fedotov, A. V. - 483, 1472
Fedotova, L. S. - 1619
Fedukin, Yu. A. - 1474
Fel'dman, Ya. S. - 1789
Felikson, E. I. - 267
Fetisov, M. M. - 98
Filatov, É. Ya. - 452
Finkel'shtein, V. E. - 944
Fleer, A. G. - 1400, 1647
Fraktovnikova, A. A. - 1090
Fridman, A. É. - 300, 765
Frolov, V. F. - 1575
Frumkin, V. D. - 682
Furman, A. - 745

G

Gabinov, V. L. - 1341
Gaevskii, N. A. - 1202
Galinskaya, M. N. - 1344
Galitskii, I. L. - 696

Gangnus, V. S. - 230
Ganin, E. A. - 1036
Gartman, V. N. - 1597
Gauzner, S. I. - 28, 636, 1347
Gavrilov, Yu. S. - 815
Gel'man, M. M. - 1273, 1452, 1756
Gerashchenko, O. A. - 1703
Gershkovich, E. A. - 114
Gertman, Yu. M. - 1114
Gladkaya, N. V. - 1536
Glazov, B. I. - 397
Glukhikh, V. M. - 1751
Gogiberidze, V. V. - 454
Gokhberg, G. N. - 1003
Golant, V. M. - 581
Golenkov, A. N. - 109
Gol'man, R. A. - 937
Goloborod'ko, V. T. - 940
Golod, S. D. - 783
Golovin, V. A. - 1632
Golyshev, Yu. M. - 629
Goncharov, E. N. - 68
Gorazdovskii, T. Ya. - 1795
Gorbatov, A. A. - 1675
Gorbatsevich, S. V. - 217, 1192
Gorbulov, V. F. - 206
Gorelov, L. K. - 877
Gostev, V. I. - 72
Govorov, V. S. - 663
Granat, S. S. - 1155
Grebneva, N. - 261
Gribenko, V. G. - 536
Gribennikov, N. V. - 244
Grigulevich, V. I. - 965
Gritsenko, A. P. - 359
Grudev, I. D. - 197
Grudinina, T. I. - 799
Gur'evich, A. S. - 1117
Gurvich, I. B. - 842
Gur'yanov, V. S. - 1107
Guter, R. S. - 1064
Guzhviniskii, P. I. - 1440

I

Idelevich, A. Ya. - 1508
Il'in, A. G. - 1495
Il'in, V. G. - 531
Ilyukovich, A. M. - 513, 804, 1541
Irashin, B. O. - 1635
Isaev, A. P. - 321
Isaev, B. M. - 1566
Ivanov, A. G. - 288
Ivanov, M. P. - 762
Ivanov, M. V. - 701

Ivanov, V. N. - 707
Ivanov, V. V. - 101
Ivanov, Yu. V. - 1309
Ivanova, V. A. - 1622
Ivashchenkov, V. P. - 1603

K

Kadashevich, V. I. - 411
Kadochnikov, B. I. - 270
Kafarov, T. É. - 436
Kainer, G. B. - 1516
Kalyapin, V. M. - 64
Kamenetskii, A. B. - 1536
Kamenskii, O. V. - 1601
Kaminir, G. I. - 1311, 1313
Kaminskii, G. P. - 50
Kandyba, V. V. - 1211
Kaplan, S. A. - 1149, 1432
Kaplun, O. K. - 1304
Karabanov, D. N. - 969
Karabegov, M. A. - 1555
Karavaev, F. M. - 693
Karev, V. N. - 754
Kartashevskaya, V. E. - 1230
Kavalerov, G. I. - 431
Kayak, L. K. - 1197
Kayander, M. S. - 345
Kazantsev, G. D. - 1495
Kazantsev, Yu. I. - 1723
Kedrov, B. M. - 1169
Kelin, A. V. - 602, 815
Khakhamov, I. V. - 124, 1300
Khananashvili, T. A. - 1640
Khanin, M. N. - 1013, 1762
Khavinson, V. M. - 1478
Khersonskii, M. S. - 385
Khokhlov, L. M. - 173
Khomenko, A. D. - 286
Khusainov, N. M. - 573
Kiberev, G. N. - 189
Kileso, V. S. - 1375
Kim, G. V. - 146
Kirenkov, I. I. - 1207
Kirichenko, A. P. - 940
Kirin, Yu. P. - 1730
Kisel', A. N. - 349
Kivenzor, Ya. U. - 749
Kizilov, V. U. - 691
Klebanov, I. Ya. - 1107
Klimashevskii, V. S. - 1714
Klimovich, V. I. - 457
Klimov, V. V. - 33
Klugman, I. Yu. - 405, 1132
Klyuev, V. V. - 527
Kneller, V. Yu. - 978

Knorring, V. G. - 720
 Knyazhitskii, A. I. - 625
 Knyupfer, A. P. - 127, 250, 426
 Kochan, V. A. - 1579
 Kochin, V. P. - 137, 571, 1010
 Kogan, A. V. - 947
 Kokodii, N. G. - 1684
 Kokorev, L. S. - 337
 Kolbasnikova, A. I. - 1068
 Kollerov, D. K. - 1260, 1561
 Koltik, E. D. - 380, 591, 1048
 Kol'tsov, A. A. - 969
 Kolunov, V. S. - 883
 Komlik, V. V. - 1483
 Komrakov, Yu. I. - 1555
 Konchaeva, L. B. - 799
 Kondratenko, V. M. - 724, 1161
 Konnov, A. F. - 271
 Kononenko, V. I. - 286
 Konovalov, A. P. - 88
 Konovalov, S. F. - 986
 Kopylov, B. I. - 288
 Kopytin, N. M. - 1755
 Koridalin, V. E. - 447
 Korinfskii, D. F. - 1075
 Korndorf, S. F. - 877
 Korobchenko, V. A. - 332
 Korobeinikova, I. E. - 94
 Korobko, I. M. - 1426
 Korotkov, P. A. - 1689
 Korsun, A. S. - 337
 Kostenko, O. A. - 1444
 Kostenko, V. I. - 1532
 Kostromskoi, G. A. - 270
 Kotel'nikov, N. I. - 849
 Koryuk, A. F. - 757, 1166, 1647
 Koval', V. A. - 1355
 Kovylov, N. B. - 405, 1132
 Kozlov, B. I. - 300
 Kravchenko, S. A. - 380, 591
 Kravtsov, A. N. - 23, 1789
 Kremlevskii, P. P. - 1364
 Kremlevskii, V. P. - 546
 Krichevskii, E. S. - 1744
 Kriksunov, V. M. - 602, 815
 Kritskii, A. E. - 359
 Krivoshein, M. I. - 373
 Kropacheva, L. P. - 1730
 Kryaglyakova, M. A. - 1071
 Krylov, E. P. - 132
 Krylov, I. N. - 173
 Krzhimovskii, V. I. - 421
 Kublanov, B. M. - 321
 Kucherenko, G. N. - 657
 Kudashev, E. B. - 574
 Kudelin, K. M. - 469, 1421

Kudryavtsev, P. I. - 1599
 Kugaevskii, A. F. - 226, 256
 Kulakov, M. V. - 233
 Kulemin, A. A. - 591
 Kungurtsev, A. B. - 445
 Kupershtein, L. N. - 707
 Kurzner, E. G. - 1149
 Kuz'min, V. V. - 489, 793
 Kuznetsov, G. M. - 838
 Kuznetsov, K. A. - 278
 Kuznetsov, V. P. - 127, 250, 426
 Kuznetsov, Yu. V. - 1124
 Kytin, G. A. - 1693

L

Lakh, V. I. - 1368
 Laricheva, L. F. - 1478
 Laskavyl, V. N. - 81
 Latushkin, V. F. - 1443
 Latyshev, V. M. - 505
 Lazarev, M. S. - 587
 Lazareva, N. A. - 1638
 Lebedev, A. A. - 1421
 Lebedeva, N. G. - 838
 Leikin, A. Ya. - 194
 Leont'eva, G. V. - 920
 Leshkovtsev, V. G. - 267
 Levedev, V. F. - 1036
 Levin, A. F. - 28, 636
 Levin, B. M. - 920
 Lifanov, I. I. - 1068
 Limanov, I. A. - 938
 Lishanskii, R. M. - 1597
 Lobofov, A. V. - 1481
 Lobzhanidze, N. G. - 1284
 Loginov, É. A. - 1268
 Lomaev, G. Z. - 644
 Lopanenko, V. P. - 64
 Losev, V. V. - 75
 Loskutov, G. I. - 1135
 Losyatinskii, V. A. - 1584
 Lozovoi, V. S. - 1698
 Lubentsov, V. F. - 1127, 1718
 Luk'yanov, V. S. - 183, 925, 1667
 Lüzius, G. - 958
 Lyapin, I. V. - 1075
 Lysenko, A. N. - 1426
 Lysenko, E. N. - 1723

M

Magda, I. N. - 359
 Magid, L. M. - 1609
 Makedoshin, A. I. - 733
 Makhov, Yu. A. - 1505

Maksimova, V. L. - 244
 Malanichev, L. A. - 731
 Maloshenko, O. Ya. - 1638
 Malykhin, Yu. I. - 226
 Manevich, E. M. - 318
 Markelov, V. A. - 25
 Markov, N. N. - 486, 929
 Markov, P. U. - 443
 Markova, L. P. - 838
 Marunchak, D. E. - 1579
 Mashin, B. A. - 315
 Matulyavichyus, V. P. - 414
 Matveev, V. I. - 428, 1078
 Medvedenko, N. F. - 85
 Medvedev, V. G. - 1319
 Melik-Shakhnazarov, T. A. - 1034, 1321
 Melkumyan, V. E. - 1132
 Mendelev, B. A. - 281
 Mgaloblishvili, K. D. - 1561
 Mif, N. P. - 467
 Mikhailov, V. A. - 1052
 Mikina, V. D. - 1216
 Milov, L. T. - 1501
 Mil'shtein, I. I. - 1360
 Mindin, A. A. - 1355
 Mironov, V. I. - 203
 Mironov, Yu. S. - 479, 611
 Mishchenko, D. V. - 1569
 Mishin, A. M. - 884
 Mkhitarian, M. M. - 1548
 Moiseev, V. S. - 1472
 Moiseichenko, V. S. - 641
 Morin, V. A. - 622
 Moroz, A. M. - 1400
 Mosyagin, R. V. - 641
 Motsonashvili, R. D. - 1640
 Muratov, E. A. - 189
 Mutafl, A. N. - 828
 Myazdrikov, O. A. - 983

N

Nadol'skii, Yu. S. - 709
 Naishuler, G. M. - 1544
 Nasonov, A. P. - 963
 Nasonov, V. E. - 150
 Nazarenko, A. M. - 1714
 Nefed'ev, V. A. - 1075
 Nemashkalo, L. P. - 940
 Nemshaev, S. P. - 1347
 Nemtsov, N. Yu. - 1083
 Nikiforov, V. D. - 998
 Nikitin, E. A. - 986
 Nikitin, V. A. - 622, 783
 Nikitskii, V. S. - 122

Nikritin, P. A. - 1440
 Nikulin, V. N. - 452
 Noginova, N. M. - 1723
 Novikov, A. V. - 1679

O

Oksamitnyi, N. N. - 1575
 Oleinik, B. N. - 1216
 Oleinikov, P. P. - 78, 1373
 Oleinikova, L. D. - 1373
 Orlov, S. B. - 12, 178, 473
 Orlova, M. P. - 45, 352, 1087, 1693
 Ormuzd, A. M. - 965
 Oseikov, A. A. - 389
 Osmachkin, B. P. - 706
 Ostromukhova, G. P. - 693
 Ostroukhov, I. V. - 751
 Ovchinnikov, Yu. M. - 318

P

Palei, M. A. - 555
 Palli, G. N. - 1621
 Panfilov, E. A. - 501
 Panova, I. N. - 59
 Parashin, V. B. - 1235
 Parshukov, P. A. - 286
 Pastukhov, V. V. - 1029
 Paulyukonis, I. I. - 1013
 Pavlov, L. E. - 109
 Pavlycheva, L. S. - 1347
 Pekelis, V. L. - 749
 Pellinets, V. S. - 651
 Peredel'skii, G. I. - 1726
 Perel'man, E. I. - 1357
 Peschanski, B. I. - 1080
 Petrosyan, G. G. - 144, 593, 822
 Petrov, G. D. - 648
 Petrov, N. B. - 589
 Petrov, N. I. - 1411
 Petrovichev, V. I. - 337
 Petukhov, A. I. - 1577
 Petukhov, V. I. - 718
 Pliastro, V. P. - 1048
 Pidarin, N. M. - 862
 Pigín, S. M. - 619
 Pilipchenko, P. Z. - 576
 Pimenov, Yu. A. - 1114
 Pines, V. N. - 1360
 Pinski, F. S. - 12, 178, 473, 1604
 Pirozhkov, N. V. - 846
 Pliner, Yu. L. - 297
 Plotnikov, A. I. - 275
 Pluzhnik, V. I. - 286
 Pobezhimov, A. I. - 1587

Podborski, A. I. - 965
 Podenko, N. P. - 1566
 Pokatev, A. I. - 825
 Polevoi, V. S. - 1689
 Polivoda, B. I. - 963
 Polukhin, G. I. - 495
 Polunov, Yu. L. - 877, 1064
 Polyakov, Yu. A. - 1485
 Polyakova, N. S. - 1080
 Polyulyakh, K. S. - 68
 Popov, A. I. - 574
 Popov, A. V. - 28, 636
 Popov, P. I. - 288
 Popov, V. M. - 587, 1674
 Popov, V. N. - 954
 Popovich, A. I. - 324
 Portak, R. A. - 1368
 Pospelov, V. K. - 1159
 Potekhin, A. M. - 281, 836
 Poyarkova, V. E. - 682
 Pritsker, V. I. - 799, 811
 Pronenko, V. I. - 144
 Puryaev, D. T. - 780
 Pyatin, Yu. M. - 117
 Pylypyuk, I. V. - 1571

R

Rabinovich, S. G. - 370, 461
 Raetski, A. S. - 1036
 Raikov, B. K. - 522
 Rakhmanin, B. I. - 283
 Rastrusin, Yu. B. - 78
 Ravvin, A. G. - 747
 Razumovskii, V. A. - 846
 Remenik, A. Sh. - 64
 Remizov, Yu. S. - 146
 Reznik, K. A. - 169
 Reznik, M. B. - 688
 Ribet', I. E. - 1054
 Rogachevskii, B. M. - 283
 Rogalev, V. G. - 1495
 Romonov, V. D. - 616
 Romodanov, A. N. - 585
 Roose, É. F. - 1652
 Rozenberg, V. Ya. - 907
 Rozhdestvenskaya, T. B. - 1223
 Rozhdestvenskii, G. N. - 819
 Rozhkov, V. M. - 877
 Rozin, A. G. - 1741
 Rozov, Yu. L. - 306
 Rubichev, N. A. - 907
 Rubashov, I. B. - 88
 Rudashevskii, G. E. - 447, 1675
 Rudenko, P. V. - 1142
 Rukina, L. K. - 670
 Rumyantsev, A. V. - 608

Russikh, Yu. A. - 332
 Rutman, G. I. - 241, 565, 854
 Ryabov, A. B. - 581
 Ryzhevskii, A. G. - 1730

S

Saakov, V. I. - 1548
 Safonov, O. A. - 501
 Saks, O. V. - 804
 Salishchev, G. S. - 1317
 Sal'nikov, M. P. - 1791
 Sal'nikov, Yu. V. - 1481
 Samarin, A. - 1468
 Satserdotov, P. A. - 929
 Sedyakin, M. N. - 452
 Selinov, I. P. - 1176
 Semenko, N. G. - 1102
 Serebryakov, A. I. - 363
 Seredenko, B. G. - 1714
 Sergeev, O. A. - 1216
 Sergeev, V. A. - 477
 Severinski, A. Ya. - 1488
 Shabalina, M. B. - 16
 Shachnev, Yu. A. - 747
 Shaevich, A. B. - 1254, 1325
 Shakurov, P. F. - 1414
 Shapiro, E. Z. - 811
 Shapiro, L. M. - 1097
 Sharevskaya, D. I. - 45, 352
 Shchegolikhin, V. A. - 1586
 Shcherbakov, Ya. E. - 440
 Sheider, R. I. - 846
 Sheina, S. P. - 194
 Shelepin, A. - 1466
 Sheremet, E. M. - 770
 Sheremet'ev, É. V. - 679
 Sherstyukov, N. G. - 1068
 Shestakov, A. G. - 1102
 Shestopalov, Yu. N. - 597
 Shevchenko, E. B. - 1793
 Shevtsov, G. A. - 770
 Shinkarenko, V. L. - 1525
 Shirochenskii, A. E. - 1404
 Shirokov, K. P. - 461
 Shishov, A. D. - 210
 Shlemovich, Ya. A. - 1355
 Shliomovich, M. Kh. - 1449
 Shneider, R. I. - 1382
 Shost'in, N. A. - 866
 Shrago, L. K. - 1080
 Shramkov, E. G. - 1223
 Shtern, I. I. - 236
 Shubarin, Yu. V. - 541
 Shuster, V. G. - 1064
 Shustrova, L. A. - 1127

Sigal, G. L. - 449
 Silenko, M. M. - 1023
 Silin, L. L. - 1303
 Simindei, V. P. - 260
 Simonov, V. A. - 1036
 Simonyan, G. A. - 1555
 Simonyan, S. G. - 1319
 Sinel'nikov, A. E. - 790
 Sirchenko, V. Ya. - 1483
 Sitnikov, L. S. - 674, 1390
 Skalevaya, G. M. - 445
 Skalevoi, V. V. - 445
 Skobelev, O. P. - 522
 Skorniyakov, S. Ya. - 752
 Skripnik, Yu. A. - 516
 Skubko, V. A. - 691
 Slavina, N. P. - 787
 Slazhnyi, M. D. - 37
 Slutskii, N. P. - 1023
 Smimov, A. V. - 787
 Smimov, B. G. - 1344
 Smimov, B. P. - 455
 Smimov, O. D. - 858
 Smimova, N. A. - 1197
 Smulakovskii, M. B. - 1440
 Smushkovich, B. L. - 342
 Snytko, A. Ya. - 1417
 Sokolov, A. A. - 1766
 Sokolov, G. A. - 1689
 Sokolov, O. T. - 508
 Sollogub, V. S. - 1519
 Solov'ev, V. G. - 1347
 Solov'ev, V. S. - 194
 Solov'eva, G. R. - 1796
 Solovskii, G. G. - 719, 1643
 Solyanik, A. S. - 1714
 Sorin, Ya. M. - 1588
 Sretenskii, V. N. - 602
 Sribner, L. A. - 1080
 Stadnik, P. E. - 1532
 Stadnyk, B. I. - 1368
 Starkov, V. M. - 452
 Starobinskii, N. M. - 522
 Starosel'skii, V. A. - 1013, 1594, 1762
 Stepanenkov, G. G. - 1300
 Stepanov, A. L. - 1599
 Stepanov, B. M. - 1273
 Stepanov, É. K. - 455, 1565
 Stepanov, L. P. - 1202
 Stepanov, M. A. - 709
 Stepichev, A. A. - 546
 Stepin, V. V. - 297
 Strel'tsov, L. N. - 1142
 Sudarevskii, I. I. - 641
 Suprunov, V. N. - 730

Sus, A. N. - 230
 Sverdlichenko, V. D. - 597
 Svet, D. Ya. - 55
 Sviderskii, M. L. - 1140

T

Tabachnik, N. Ya. - 749
 Tabachnikova, N. A. - 1667
 Tabenkin, A. N. - 1064
 Taits, B. A. - 16
 Tal'ko-Grintsevich, P. P. - 457
 Tanskii, A. M. - 332
 Tarasov, V. P. - 1735
 Tarasov, Yu. A. - 1552
 Tarshish, M. S. - 41
 Tarzimanov, A. A. - 1698
 Tatievskii, A. B. - 300
 Taube, F. S. - 811
 Tavdgiridze, L. N. - 1284
 Tavroskii, V. P. - 899
 Terekhov, G. A. - 1360
 Terekov, A. Ya. - 1393
 Tertyshnyi, G. G. - 447
 Teverovskii, V. I. - 531
 Timofeev, B. I. - 1344
 Tipikin, V. V. - 1393
 Titov, A. - 881
 Tkachenko, V. - 1468
 Tkachev, I. L. - 1582
 Topolyanskii, Yu. A. - 37
 Trakhtenberg, L. I. - 1373
 Tretyachenko, Yu. G. - 415
 Trishkin, O. A. - 173
 Troitskii, E. A. - 1387
 Trokhan, A. M. - 505
 Troshechkin, I. M. - 248
 Truten', V. A. - 1060
 Tseitlin, Ya. M. - 916, 1163
 Tsibina, A. A. - 562, 757, 850
 Tsidelko, V. D. - 1390
 Tsimbler, Yu. A. - 37
 Tsirlin, Yu. A. - 833
 Tsoi, I. M. - 842
 Tsyrul'nikov, A. M. - 706
 Tul'guk, E. N. - 751
 Tul'in, V. A. - 1336
 Tyrsa, V. E. - 1052
 Tyurin, A. I. - 733
 Tyutikov, N. V. - 455
 Tyutikova, M. I. - 1315

U

Urazaev, Z. F. - 933
 Ushakova, T. F. - 998

Usov, V. S. - 440
 Uspenskii, Yu. P. - 273
 Utyakov, L. L. - 1390
 Uverskii, I. T. - 311

V

Valitov, R. A. - 1684
 Vasiliev, A. I. - 757
 Vasil'ev, B. V. - 6
 Vasserman, A. L. - 1355
 Vdovichenko, A. A. - 135, 1730
 Vekker, B. L. - 114
 Verbenko, E. G. - 349
 Verbovskii, D. S. - 842
 Vertogradskii, V. A. - 1701
 Villem, Ya. Ya. - 804
 Vinets, Ya. M. - 363
 Vinogradov, E. A. - 501
 Vinogradov, V. I. - 411
 Vizen, F. L. - 1490
 Vladimirovskaya, T. M. - 1090
 Volgin, L. I. - 1109, 1277
 Volkova, E. A. - 1311
 Volodarskii, V. Ya. - 907
 Vorob'ev, A. A. - 774
 Vorontsov, B. N. - 721
 Vorontsov, L. N. - 747
 Vorontsova, N. I. - 12
 Vydrin, V. N. - 1029
 Vysotskii, A. V. - 486
 Vysotskii, L. I. - 271

Y

Yagola, G. K. - 1723
 Yakubov, R. A. - 1034, 1321
 Yakushenkov, Yu. G. - 440
 Yaraloshvili, R. V. - 1048
 Yudanov, B. V. - 281
 Yudich, M. Z. - 704
 Yudin, M. F. - 693, 1257
 Yudina, S. L. - 1071
 Yukhnovskii, V. P. - 233
 Yustova, E. N. - 59, 1313
 Yuzgin, V. S. - 1129

Z

Zabezinskaya, S. T. - 451
 Zaitsev, A. E. - 1028
 Zakashanskii, L. N. - 1003, 1143
 Zakharov, B. A. - 281, 836
 Zakrevskii, D. D. - 150
 Zalivadnyi, B. S. - 951
 Zal'tsman, E. B. - 682
 Zalutskaya, T. L. - 217

Zavidonova, S. A. - 1766
Zedginidze, G. P. - 1249
Zegzhda, P. D. - 328
Zelenov, E. I. - 419
Zemel'man, M. A. - 127, 250, 426
Zernov, I. A. - 1094

Zgura, A. A. - 1575
Zhartovskii, G. S. - 206
Zhírov, V. G. - 1657
Zhukovskii, A. E. - 1360
Zhutovskii, V. L. - 246
Zimin, V. A. - 210

Zimin, V. N. - 1516
Zinin, B. S. - 696
Zlochevskii, A. B. - 203
Zolotarev, N. V. - 271
Zorin, D. I. - 597, 799
Zvyagintsev, V. N. - 1532

TABLES OF CONTENTS

MEASUREMENT TECHNIQUES

Numbers 1-12, 1969

(A translation of Izmeritel'naya Tekhnika)

Number 1

January, 1969

Engl./Russ.

New Tasks for the Metrological Service	1	3
GENERAL PROBLEMS OF METROLOGY AND TECHNICAL MEASUREMENTS		
Least Squares Method for Nonlinear Conditional Equations of Combined Measurements —E. F. Dolinskii and B. V. Vasil'ev	6	7
Method for Raising the Precision in Reading Scales of Measuring Instruments—F. S. Pinskiy, S. B. Orlov, and N. I. Vorontsova	12	11
LINEAR AND ANGULAR MEASUREMENTS		
Testing of Large-Size Spur Gears—B. A. Tait's and M. B. Shabalina	16	13
Recording the Roughness of Arched Surfaces with a Profilograph—A. N. Kravtsov	23	19
Automatic Compensation of the Temperature Error in Measurements with Acoustical Level Indicators—V. A. Markelov	25	20
MASS MEASUREMENTS		
Wheel-by-Wheel Weighing of Locomotives and Basic Requirements for Their Weighbridges —A. V. Popov, S. I. Gauzner, and A. F. Levin	28	22
MECHANICAL MEASUREMENTS		
Motor Rotation-Speed Measurements with High Dynamic Precision—V. V. Klimov	33	26
Pipe-and-Piston Gauges for Testing Liquid Meters—A. M. Aleksandrov, M. D. Slazhnii, Yu. A. Topolyanskii, and Yu. A. Tsimbler	37	29
Error of Weight and Volume Measuring Hydraulic Racks Due to Periodic Pulsations of the Liquid Flow—M. S. Tarshish	41	32
THERMOPHYSICAL MEASUREMENTS		
Thermodynamic Temperature Scale in the Range of 90 to 273.15°K and Its Comparison with the IPTS—L. B. Belyanskii, M. P. Orlova, D. N. Astrov, and D. I. Sharevskaya	45	35
Preventive Testing of Gas Flow Distribution in a Blast Furnace—G. P. Kaminskii	50	38
Certain Emissivity Criteria for Continuous Spectra of Radiation—D. Ya. Svet	55	42
OPTICOPHYSICAL MEASUREMENTS		
Comparator Attachment to Spectrophotometer SF-2M for Measuring Color Differences —E. N. Yustova and I. N. Panova	59	44
MEASUREMENTS OF ELECTRIC AND MAGNETIC PARAMETERS		
Highly Efficient Equipment for Calibrating and Testing dc Measuring Instruments —V. M. Kalyapin, V. P. Lopanenko, and A. Sh. Remenik	64	47
Automatic Instrument for Sorting Capacitors by Their Value—K. S. Polyulyakh and E. N. Goncharov	68	50
Transistorized "Blocking Switch" Circuit—V. I. Gostev	72	53
Investigating the Nature of Errors in Digital Devices—V. V. Losev	75	55
Errors in Measuring Resistivity with Four-Electrode Transducers—P. P. Oleinikov and Yu. B. Rastrusin	78	58

Nonlinearity of Transistor Capacitive Frequency Meter—K. I. Didenko and V. N. Laskavii	81	60
Measuring Statistical Parameters of Short-Circuit Currents in Arc Welding—N. F. Medvedenko .	85	63
Calculating the Contact Resistance of High-Precision Potentiometers—A. T. Belevtsev, A. P. Kononov, and I. B. Rubashov	88	65
Measuring Electromagnetic Characteristics and Diameters of Pipes by the Eddy-Current Method—I. E. Korobeinikova	94	68
Selection of the Number of Elements for Piezoelectric Transducers—M. M. Fetisov	98	72
Freeing of the Signal Shape from Distortions Produced by Equipment and Transmission Channel —V. Ya. Arsenin and V. V. Ivanov	101	74
ACOUSTIC MEASUREMENTS		
Equipment for Reciprocity Calibration of Hydrophones in a Free Field—A. N. Golenkov and L. E. Pavlov	109	79
PHYSICOCHEMICAL MEASUREMENTS		
Soviet Coulometric and Diffusion Hygrometers—E. A. Gershkovich and B. L. Vekker	114	83
Discrete-Action Titrimeters with Automatic Searching and Registration of the Points of Equivalence—R. G. Barskii and Yu. M. Pyatin	117	86
QUALITY CONTROL		
Testing the Quality of Spindle Assemblies in Lathes—A. M. Dal'skii and V. S. Nikitskii	122	88
ASSISTANCE TO MEASUREMENT LABORATORY WORKERS		
Application of Current Dividers in Testing Current Transformers—I. V. Khakhamov	124	90
DISCUSSIONS		
Methods for Normalizing the Metrological Characteristics of Measuring Devices —M. A. Zemel'man, A. P. Knyupfer, and V. P. Kuznetsov	127	92
METROLOGICAL SERVICE		
Metrological Service in a Scientific Research Institute—A. S. Eremenko and E. P. Krylov	132	95
Problem of Nonstandard Measuring Instruments—A. A. Vdovichenko	135	97
TRAINING OF PERSONNEL		
Improving the Training of Scientific Personnel in the Committee of Standards System —V. P. Kochin	137	98
REPAIR OF MEASURES AND INSTRUMENTS		
Instrument Repair Enterprises under New Planning Conditions—V. M. Abramov	140	100
INFORMATION		
Results of the All-Union Socialist Competition for the Third Quarter of 1968	142	102
Soviet Reference Measuring Instruments Exhibited in London—V. I. Pronenko and G. G. Petrosyan .	144	103
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Device for Regulating and Continuously Recording Temperature in the Presence of Electromagnetic Interference—Yu. S. Remizov and G. V. Kim	146	105
Computation of Nondirectional Cylindrical Piezoelectric Transducers—E. I. Chvertkin	147	106
Code-to-Voltage Transducer—D. D. Zakrevskii and V. E. Nasonov	150	107
NECROLOGY		
P. G. Strelkov	151	108

Number 2 February, 1969

All-Union Symposium on Metrology—V. V. M.	153	3
---	-----	---

GENERAL PROBLEMS OF METROLOGY AND MEASUREMENT TECHNIQUES		
Systematic Error in Studying Random Correlated Processes—A. M. Azizov	164	11
Plotting Confidence Intervals for Parameters of Nonnormal Populations—K. A. Reznik	169	14
INFORMATION MEASUREMENT SYSTEMS		
Production of High-Speed Measuring Systems with a Step-by-Step Motor—I. N. Krylov, O. A. Trishkin, and L. M. Khokhlov	173	17
PROBLEMS OF ENGINEERING PSYCHOLOGY		
Operator's Measurement Errors—F. S. Pinskiy and S. B. Orlov	178	21
LINEAR AND ANGULAR MEASUREMENTS		
Certification of Specimens for Checking Profilographs and Profilometers—V. S. Luk'yanov ...	183	24
Coordinate Method for Measuring the Cutting Edge Profile of a Twist Drill—E. A. Muratov and G. N. Kiberev	189	29
Instrument for Measuring Displacements and the Thickness of Dielectric Coatings —Yu. S. Bykhovskii	191	30
OPTICOPHYSICAL MEASUREMENTS		
Evaluation of Pressure and Composition of Gases in Sealed Systems—A. Ya. Leikin, V. S. Solov'ev, and S. P. Sheina	194	32
MEASUREMENTS OF TIME		
Investigation of the Oscillatory System of an Astronomical Clock—I. D. Grudev	197	34
MECHANICAL MEASUREMENTS		
Measuring Deformations of Highly Elastic Materials with Resistance Strain Gauges —A. B. Zlochevskii and V. I. Mironov	203	38
Parameter Which Characterizes the Width of the Dynamic Frequency Range of Seismic Transducers—V. F. Gorbunov and G. S. Zhartovskii	206	39
Evaluating Inflection Points of a Deflection Curve in Designing Dynamometers of a Complicated Shape—A. D. Shishov and V. A. Zimin	210	42
THERMOPHYSICAL MEASUREMENTS		
Effective Wavelength of a Spectropyrometer—L. A. Boyarskii and R. I. Efremova	214	45
MEASUREMENTS OF ELECTRICAL AND MAGNETIC QUANTITIES		
Evaluation of the Constant $h/2e$ (Magnetic Flux Quantum)—S. V. Gorbatshevich and T. L. Zalutskaya	217	47
Comparative Evaluation of the Possibility of Measuring Precisely Changes in the Value of Resistors—S. S. Afanas'ev	221	50
Measuring the Resistive Component of Impedances on Single-T Circuits at Frequencies Exceeding 1 MHz—A. F. Kugaevskii, Yu. I. Malykhin, and N. N. Chernousova	226	52
Resonance Bridge for Investigating Highly Conducting Substances—A. N. Sus and V. S. Gangnus.	230	56
Checking and Correcting Readings of Commercial pH Meters—A. S. Benevol'skii, M. V. Kulakov, and V. P. Yukhnovskii	233	58
Output Thyristor Devices with Protective Rejection for Contactless Telemetering, Testing, and Control Systems—I. I. Shtern	236	60
THE METROLOGICAL SERVICE		
Ways for Developing the Metrological Service at Enterprises—G. I. Rutman	241	64
State and Departmental Inspection of Measuring Equipment and Its Efficiency —N. V. Gribennikov and V. L. Maksimova	244	66
ASSISTANCE TO MEASUREMENT LABORATORY WORKERS		
Testing of High-Resistance dc Bridges—V. L. Zhutovskii	246	67
Testing the Delay Line of Instrument I2-7—I. M. Troshechkin	248	69

DISCUSSIONS

- Methods for Normalizing Metrological Characteristics of Measuring Devices—M. A. Zemel'man,
A. P. Knyupfer, and V. P. Kuznetsov 250 70

CRITICAL REVIEWS

- A. L. Grokhol'skii. Q-Meters. Nauka, Siberian Branch (1966)—A. F. Kugaevskii 256 74

INFORMATION

- Instruments for Physical Investigations Shown at the Italian Industrial Exhibition in Moscow
—A. G. V. 258 75
- Conference Dedicated to the 50-th Anniversary of the Metric System in the USSR
—V. P. Simindei 260 76
- Courses for Raising Qualifications at the Altai LGN—N. Grebneva 261 76
- Scientific and Technical Conference on Measurement of Small Direct Currents and Voltages
—A. M. I. 262 77
- Pavel Nikolaevich Agaletskii (60th Birthday) 265 79

BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR

- Measuring the Characteristics of Materials for Elastic Elements—E. I. Felikson
and V. G. Leshkovtsev 267 80
- Measurement of Deformations with Strain Probes—G. A. Kostromskoi and B. I. Kadochnikov 270 81
- Instrument for Determining Value and Direction of Low-Speed Liquid Flows—L. I. Vysotskii,
N. V. Zolotarev, A. F. Konnov, and V. M. Dorodnov 271 82
- Testing Metrological Characteristics of Surface-Roughness Measuring Instruments
—V. Ya. Barash and Yu. P. Uspenskii 273 83
- Standard for Testing Slide Gauges—A. I. Plotnikov 275 84
- Measuring Depth of Point Defects in Polished Surfaces by Means of a Linnik Microinterferometer
—B. A. Chunin 276 84
- Method for Processing Measurements of Photographic Shutter Exposures—K. A. Kuznetsov 278 85
- Elimination of Systematic Error in an Integrating Magnetic Amplifier—B. A. Zakharov,
B. A. Mendeleev, A. M. Potekhin, and B. V. Yudanov 281 88
- Measuring Maximum Value of Differential Permeabilities—B. I. Rakhmanin
and B. M. Rogachevskii 283 89
- Automatic Unit for Luminous-Beam Oscillographs—V. I. Pluzhnik, V. I. Kononenko,
P. A. Parshukov, and A. D. Khomenko 286 90
- High-Precision Concentration Meter with an Inductive Transducer—A. G. Ivanov,
B. I. Kopylov, and P. I. Popov 288 91

Number 3

March, 1969

- Systematic Raising of Quality and Reliability of Products 291 3
- Organization of the Output of Standard Composition Specimens—Yu. L. Pliner
and V. V. Stepin 297 7
- RELIABILITY IN MEASURES AND INSTRUMENTS
- General Problem and Specific Aspects of Reliability in Measuring Devices—V. O. Arutyunov,
B. I. Kozlov, A. B. Tatievskii, and A. É. Fridman 300 9
- GENERAL PROBLEMS OF METROLOGY AND MEASUREMENT TECHNIQUES
- Optimal Nonlinear Processing of Data Obtained from Two Sources of Information—Yu. L. Rozov
and I. B. Chelpanov 306 14
- LINEAR AND ANGULAR MEASUREMENTS
- Draft of a New Standard for Contact Interferometers—I. T. Uverskii 311 17

Construction of a Measuring Device for Small Displacements—A. I. Andreev and B. A. Mashin . . .	315	19
Infrared Bichromator for Testing Thickness of Thin Films of Water on the Surface of a Solid —E. M. Manevich and Yu. M. Ovchinnikov	318	21
Photoelectric Adjustment of Operating Organs of Automatic Graduating Machines—A. I. Fedotov, B. M. Kublanov, A. P. Isaev, Yu. I. Brainin, and B. A. Emel'yanov	321	23
MASS MEASUREMENTS		
High Speed Dynamic Weighing of Unit Loads—A. I. Popovich	324	25
MECHANICAL MEASUREMENTS		
Calculation of Effect of Resistance Forces in Mechanical Subassemblies of Measuring Instruments —B. É. Arshanskii and P. D. Zegzhda	328	28
Calculating Parameters of an Optical Instrument for Measuring Velocity by the Contactless Method—A. M. Tanskii, Yu. A. Russkikh, V. A. Korobchenko, and O. V. Chevela	332	30
Method for Calculating Velocity Distribution of Turbulent Flow in Noncircular Channels —L. S. Kokorev, A. S. Korsun, and V. I. Petrovichev	337	33
Economic Estimation of Metrological Efficiency of Testing Machines—B. L. Smushkovich	342	37
THERMOPHYSICAL MEASUREMENTS		
Automated Checking of Telescopes for Total Radiation Pyrometers and Quality Tests of Photoelectric Transducers—M. S. Kayander	345	38
Calibrated dc Source for Checking Incandescent Lamps—E. G. Verbenko and A. N. Kisel'	349	41
Comparison of the NPL, VNIIFTRI, and NRC Temperature Scales in the Range 90-273.15°K —L. B. Belyanskii, M. P. Orlova, D. I. Sharevskaya, and D. N. Astrov	352	43
MEASUREMENTS OF ELECTRIC AND MAGNETIC PARAMETERS		
Raising the Rapidity of Action of Electrometers—A. P. Eremin	355	44
Capacitive Displacement Transducer with Deflecting Electrodes—A. P. Gritsenko, A. E. Kritskii, and I. N. Magda	359	47
Production Testing of Permanent Magnets with Respect to Residual Induction—Ya. M. Vinets and A. I. Serebryakov	363	49
Contactless Conductometric Transducers from Materials with High Dielectric Constant —B. S. Bezprozvannyi and V. S. Andreev	366	51
Evaluation of the Quality of Highly Sensitive Measuring Amplifiers—S. G. Rabinovich	370	54
Parametron Current Meter—M. I. Krivoshein	373	56
Two-Channel Frequency Converter with Quartz Filters—S. A. Kravchenko and E. D. Koltik	380	60
Determination of Frequency Characteristics of an Inductive Slipring—L. P. Egorychev and M. S. Khersonskii	385	63
Method of Measuring the Attenuation Diminishing the Mismatch Error—A. A. Oseiko	389	65
Effect of Harmonic Noise on Voltage-Controlled Oscillators—B. I. Glazov	397	70
PHYSICOCHEMICAL MEASUREMENTS		
Measuring Capacity of Miniature Leak Valves and Sensitivity of Mass Spectrometers —G. Kh. Chedzhemov	400	71
Some Features of the Dielectric Method of Measuring Moisture Content in Lossy Dielectrics —I. Yu. Klugman and N. B. Kovylov	405	75
RADIATION MEASUREMENTS		
Measurement of Characteristics of Cylindrical Proportional Internal-Filling Counters near the End Insulators—V. I. Albul and V. G. Baranov	409	78
Magnetic Beta-Ray Spectrometer Automatic System for Measuring Spectra of Internal-Conversion Electrons—V. I. Vinogradov and V. I. Kadashevich	411	79
Method for Producing Impressions of Electric Fields of Coronating Electrodes —V. P. Matulyavichyus	414	81
METROLOGICAL SERVICE		
Introduction of New Measuring Techniques in Uzbekistan and Methods of Calculating Their Effectiveness—Yu. G. Tret'yachenko	415	82

Standardization of Card Registers Containing Reference Data on Measuring Instruments —E. I. Zelenov	419	84
ASSISTANCE TO MEASUREMENT LABORATORY WORKERS		
Slotted Line Used for Comparing uhf Wattmeters—V. I. Krzhimovskii	421	85
DISCUSSIONS		
Methods of Standardization of Metrological Characteristics of Measuring Instruments —M. A. Zemel'man, A. P. Knyupfer, and V. P. Kuznetsov	426	88
Definition of Concept Measurement Information—G. I. KavaleroV	431	91
INFORMATION		
Summary of the All-Union Socialist Competition for the Fourth Quarter of 1968	434	93
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
System for Measuring Gas Volume—T. É. Kafarov	436	94
Measurement of Amplification and Losses in Gas Lasers—V. I. Matveev and M. M. Drozdov	438	95
Two-Coordinate Photoelectric Vibrograph—G. V. Dureiko, V. S. Usov, Ya. E. Shcherbakov, and Yu. G. Yakushenkov	440	96
Step Gauges for Calibrating Light Sectioning Optical Instruments—P. U. Markov	443	97
A Method for Weighing Loads on Crane Scales—V. V. Skalevoi, A. B. Kungurtsev, and G. M. Skalevaya	445	98
Contactless Method of Measuring Vibrations of Machine Parts and Mechanisms by Using Lasers —V. E. Koridalin, G. E. Rudashevskii, and G. G. Tertyshnyi	447	100
Testing a G5-2A Pulse Generator with a Resistance Box—G. L. Sigal	449	101
I2-9A Intervalometer Redesigned to Check Amplitudes of Pulsed Voltages—S. T. Zabezinskaya	450	102
Voltage Stabilizer for U-309 dc Potentiometric Module—N. I. Kotel'nikov	452	103
Instrument for Statistical Processing of Recordings of Parts Loading—É. Ya. Filatov, S. S. Dmitrichenko, V. N. Nikulin, M. N. Sedyakin, and V. M. Starikov	454	104
Letter to the Editor—V. V. Gogiberidze	456	105
Various Characteristics of Silicon Diffusion-Drifted Detectors—É. K. Stepanov, B. P. Smirnov, and N. V. Tyutikov	457	106
Large-Volume Quality Control of Iron Carbonyl—V. I. Klimkovich and P. P. Tal'ko-Grintsevich	459	107

Number 4

April, 1969

Precision Classes of Measuring Instruments—K. P. Shirokov and S. G. Rabinovich	461	3
GENERAL PROBLEMS OF METROLOGY AND TECHNICAL MEASUREMENTS		
Evaluating Errors by Means of Computer Simulation—N. P. Mif	467	8
Method for Approximating Experimental Curves to a Power Polynomial—K. M. Kudelin	469	9
PROBLEMS OF ENGINEERING PSYCHOLOGY		
Redrafting Standards for Reading Device Components—F. S. Pinskiĭ and S. B. Orlov	473	11
LINEAR AND ANGULAR MEASUREMENTS		
Testing the Precision of Metal-Working Machines—V. A. Sergeev	477	13
Evaluating Resistance to Vibration of Scale Instruments Used for Linear Measurements —Yu. S. Mironov	479	15
Contactless Inductive Instrument for Testing Dimensions of Surfaces with Discontinuities —A. N. Chertovskikh and A. V. Fedotov	483	18
Application of Fixed Gauges in Modern Engineering—A. V. Vysotskii and N. N. Markov	486	20
MECHANICAL MEASUREMENTS		
Reference Equipment for Reproducing the Unit of Pressure in the Range of 10^{-3} – 10^{-6} N/m ² —A. V. Eryukhin and V. V. Kuz'min	489	22

VNIIM (All-Union Scientific Research Institute of Metrology) Piston Gauge with a Range up to 3500 MN/m ² —G. I. Polukhin	495	26
Variometric Meters of Rate of Pressure Variations (Review of US Patents)—E. A. Panfilov, O. A. Safonov, and E. A. Vinogradov	501	31
Investigating Flow of Liquids by Means of an Optical Correlation Method—N. F. Derevyanko, V. M. Latshev, and A. M. Trokhan	505	34
MEASUREMENTS OF ELECTRIC AND MAGNETIC PARAMETERS		
Temperature Effect on Voltage in a Two-Terminal Network with a Thermistor—O. T. Sokolov	508	36
Adjustable Calibrated dc Source of 10 ⁻¹² -10 ⁻⁸ A—V. M. Borzov and A. M. Ilyukovich	513	40
Transducer Methods and Circuitry of Electronic Instruments—Yu. A. Skripnik	516	42
Construction of Transducers Which Utilize Transient Processes—A. A. Boltyanskii, B. K. Raikov, O. P. Skobelev, and N. M. Starobinskii	522	47
Design of an Eddy-Current Transducer for Testing Moving Objects—V. V. Klyuev	527	50
Design Principles of a Device for Evaluating Time and Frequency Sources—V. G. Il'in and V. I. Teverovskii	531	53
Application of an Electron Beam in Electrometric Measurements—V. G. Gribenko	536	56
Measuring Radiation Pattern and Gain of Antennas with Elliptical Polarization—Yu. V. Shubarin and T. N. Anishchenko	541	58
PHYSICOCHEMICAL MEASUREMENTS		
Compensating Vibration Viscosimeter—V. P. Kremlevskii and A. A. Stepichev	546	62
Evaluating Errors of Moisture Meters—M. A. Berliner	551	65
ASSISTANCE TO MEASUREMENT LABORATORY WORKERS		
Checking of Angular Distances between Centers by Means of Chords—M. A. Palei	555	67
METROLOGICAL SERVICE		
Automatic System for Collecting and Processing Information on Means of Measurement—A. A. Tsibina	562	71
Improving Testing of Nonstandard Measuring Instruments—G. I. Rutman	565	74
Raising Quality and Reliability of Measuring Equipment	567	75
INFORMATION		
In the Committee of Standards, Measures, and Measuring Instruments Attached to the Council of Ministers, USSR	569	76
All-Union Courses for Metrologists Have Been Converted into an Institute—V. P. Kochin	571	77
All-Union Conference on Precision Measurements of Flows, Quantities, and Volumes—N. M. Khusainov	573	78
Conference on Measurement of Turbulence—E. B. Kudashev and A. I. Popov	574	79
NTO "Priborprom" Primary Organization—P. Z. Pilipchenko	576	80
Hungarian Measuring Equipment Exhibition in Moscow—L. M. M.	577	80
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
System for Measuring Forces in Superconducting Bearings—A. B. Ryabov and V. M. Golant	581	83
Measurement of Kinetic Adhesion—Yu. V. Ashkerov and A. S. Akhmatov	583	85
Evaluation of Elasticity Modulus by Means of an Electrotorsional Measurement of a Small Displacement—A. N. Romodanov	585	86
Method for Determining Rapidly Thermal Resistance and Temperature in Surface Contact Areas of Solid Bodies—V. M. Popov and M. S. Lazarev	587	87
Narrowing Frequency Spectrum in Measuring Klirr-Factors—N. B. Petrov	589	88
Equipment for Obtaining Signals with Precisely Set Time Relationships and Equal or Multiple Frequencies—E. D. Koltik, S. A. Kravchenko, and A. A. Kulemin	591	90
Investigating Radiation Temperature of Gas-Discharge Noise Generators in the Centimeter Range—G. G. Petrosyan	593	91

Number 5 May, 1969

GENERAL PROBLEMS OF METROLOGY AND MEASUREMENT TECHNOLOGY

Optoelectronic Methods and Means for Automation of Metrological Work—Sh. N. Bakhtadze, A. Ya. Bezikov, D. I. Zorin, V. D. Sverdlichenko, Yu. N. Shestopalov, and S. P. Éskin	597	3
Basic Propositions in Theory and Practice of Applied Metrology—V. N. Sretenskii, A. V. Kelin, and V. M. Kriksunov.	602	6
Evaluating Precision of Instruments and Measurement Results—A. V. Romyantsev.	608	11
Errors in Reading Scales of Measuring Instruments—Yu. S. Mironov.	611	12
Selection of Integrating Time for a Transient Random Process—V. D. Romanov.	616	16
Evaluating the Error of a Measured Quantity with a Suppressed Initial Part—S. M. Pigin.	619	18

LINEAR AND ANGULAR MEASUREMENTS

Instrument PPS-11 for Testing Linearity, Flatness, and Coaxiality of Products—V. A. Morin, F. M. Danilevich, and V. A. Nikitin.	622	20
Extending Measurement Ranges of Pneumatic Systems—A. I. Knyazhitskii and M. I. Étingof.	625	22
Testing Circularity of Cylindrical Components by Means of Flexible Elements—Yu. M. Golyshev.	629	25
Application of Harmonic Analysis for Evaluating Deviations in Position and Shape of Surfaces in Components—V. S. Chikhalov.	633	28

MASS MEASUREMENTS

Methods for Testing Locomotive Weighbridges—A. V. Popov, S. I. Gauzner, and A. F. Levin.	636	30
--	-----	----

MECHANICAL MEASUREMENTS

Primary Transducers of Manometers with Dynamic Balancing—I. I. Suderevskii, R. V. Mosyagin, and V. S. Moiseichenko.	641	34
Analytical Method for Evaluating Quality of Tensile Testing Machines—G. Z. Lomaev.	644	36
Precision in Measuring with a Probe the Velocity of Free-Molecular Plasma Flows—G. D. Petrov.	648	38

THERMOPHYSICAL MEASUREMENTS

Remote Testing of Resistance Thermometers—V. S. Pellinets.	651	40
--	-----	----

MEASUREMENTS OF ELECTRIC AND MAGNETIC PARAMETERS

New State Standard on "Q-Meters. Methods and Means for Their Testing"—É. A. Abrosimov.	654	42
General Classification in Phase Measurements—G. N. Kucherenko.	657	44
Classification and Brief Characteristic of Sign Displays—V. S. Govorov.	663	49
Digital Tracking and Balancing Instruments with Frequency Null Detectors—L. K. Rukina.	670	53
Decimal Counters with Pulse-Position Elements—L. S. Sitnikov.	674	56
Parametric Oscillator with a Semiconductor-Capacitance Frequency Adjustment—R. L. Dudnik and É. V. Sheremet'ev.	679	60
Methods for Raising Precision in Measuring the Characteristics of Dielectrics at Ultrahigh Frequencies—G. D. Burdun, E. B. Zal'tsman, V. E. Poyarkova, and V. D. Frumkin.	682	62
Evaluation of Dynamic Factors of High-Frequency Galvanometers—M. B. Reznik.	688	65
Meter of Transverse Component of a Magnetic Field inside a Linear Accelerator—V. U. Kizilov and V. A. Skubko.	691	67

RADIATION MEASUREMENTS

Standardization of Methods for Testing Gamma-Ray Sources—F. M. Karavaev, M. F. Yudin, G. P. Ostromukhova, and A. F. Drichko.	693	68
--	-----	----

ASSISTANCE TO MEASUREMENT LABORATORY WORKERS

Special Techniques in Testing Tapered Thread Gauges according to GOST 9909-61—B. S. Zinin and I. G. Galitskii.	696	71
Measurement of Internal Cones by Means of Comparison Methods—V. Ya. Éidinov.	699	73
Effect of Lighting on Precision in Weighing the Mass of Microparticles—V. A. Arslambekov and M. V. Ivanov.	701	74

Measuring According to GOST 13384-67 the Time Characteristics of Automatic-Equipment Components—M. Z. Yudich	704	76
Rack for Testing Radioisotope Thermocontrollers—B. P. Osmachkin, A. M. Tsyul'nikov, and A. A. Demenkov	706	77
Electronic Potentiometer Attachment for Maintaining Constant Temperature—L. N. Kupershtein and V. N. Ivanov	707	78
Tolerance Tables for Testing Audio Oscillators ZG-2A, ZG-10, ZG-12, G3-33, and G3-34—M. A. Stepanov and Yu. S. Nadol'skii.	709	79
DISCUSSIONS		
Pressing Problems of Precision in Metrology—I. D. Fainerman	711	81
Reference to I. D. Fainerman's Article on "Problems of Precision in Metrology"—P. Berezin	717	84
Range of Concepts "Testing" and "Measurement"—V. I. Petukhov	718	85
Terminology of Testing—G. G. Solovskii	719	85
Concepts of "Measure" and "Measuring Transducer"—V. G. Knorring.	720	86
METROLOGICAL SERVICE		
Raising Reliability of Production Testing—B. N. Vorontsov	721	87
Margins for Raising Reliability of Measuring Instruments—V. M. Kondratenko	724	89
Analysis of the Relationship between the Quality of Articles and Their Measurement and Testing—M. A. Adadurova	726	90
Improving the Condition of Measuring Equipment—A. F. Antipov	729	92
Mechanization of Labor-Consuming Testing Work—V. N. Suprunov	730	93
The Role of Measurements in Everyday Life—L. A. Malanichev	731	93
REPAIRS OF MEASURES AND INSTRUMENTS		
Repairs of Measuring Equipment by Metrological Services of Enterprises—A. I. Makedoshin and A. I. Tyurin	733	94
INFORMATION		
L. M. Zaks (Sixtieth Birthday).	735	96
Measuring Equipment at the "Autoindustry-68" Exhibition—I. L. G.	737	97
"Gancz Instrument" Hungarian Exhibition—A. G. V.	740	98
Contest of Metrologist-Rationalizers—A. Furman.	745	101
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Rack for Determining Dynamic Precision Characteristics of Dimensional Process Control Devices—L. N. Vorontsov, A. G. Ravvin, V. G. Chibrikov, and Yu. A. Shachnev	747	102
Experience in Applying Inductive Transducers for Testing the Shape of Products—N. Ya. Tabachnik, Ya. U. Kivenzor, and V. L. Pekelis.	749	103
Recording Dynamometer with a Uniform Scale—I. V. Ostroukhov and E. N. Tul'guk	751	105
Instrument for Testing Elastic Forces of Compression Springs—S. Ya. Skornyakov	752	106
Keeping Readings of Electromagnetic Flowmeters Independent of Local Resistances—V. N. Karev.	754	107
Measuring Temperature of Liquid Steel with Immersion Thermocouples—M. L. Fedorovskii	756	108

Number 6

June, 1969

Twenty-Five Years of the Siberian Metrological Center—A. I. Vasilev, A. F. Kotyuk, and A. A. Tsibina	757	3
GENERAL PROBLEMS OF METROLOGY AND MEASUREMENT TECHNIQUES		
Method of Expressing the Sensitivity of Measuring and Recording Apparatus—M. P. Ivanov	762	6

INFORMATION AND MEASUREMENT SYSTEMS

Dependence between the Functioning Efficiency and Reliability of Multichannel Measuring Systems—A. É. Fridman

765 8

Reliability of Redundant Systems in the Presence of Catastrophic and Gradual Failures

—G. A. Shevtsov and E. M. Sheremet

770 11

LINEAR AND ANGULAR MEASUREMENTS

Principles Underlying the Choice of a Parameter of Surface Roughness—I. V. Dunin-Barkovskii and A. A. Vorob'ev

774 13

Measurement and Testing of the Principal Parameters of Polished Conical Surfaces

—D. T. Puryaev

780 17

Coincidence Method and Apparatus for Measuring the Radius of Curvature of a Spherical

Surface—S. D. Golod, V. A. Nikitin, I. V. Akhremchik, and A. N. Aleksandrova

783 19

Standard Hardness Specimens—V. N. Dmitriev, N. P. Slavina, and A. V. Smirnov

787 22

System for Measuring Small Angular Velocities—A. E. Sinel'nikov and B. É. Blanter

790 24

Conductance of Small Apertures—A. V. Eryukhin and V. V. Kuz'min

793 26

MEASUREMENTS OF ELECTRICAL AND MAGNETIC QUANTITIES

Apparatus for Automatically Checking Ammeters, Voltmeters, and Wattmeters by dc

—A. Ya. Bezikovich, T. I. Grudnina, D. I. Zorin, L. B. Konchaeva, V. I. Pritsker, and S. P. Éskin

799 30

Calibrated Sources of Small dc Currents—V. M. Borzov, Ya. Ya. Villem, A. M. Ilyukovich, and O. V. Saks

804 33

High-Stability Compensated Reference-Voltage Source—B. S. Taube, E. Z. Shapiro,

S. P. Éskin, and V. I. Pritsker

811 38

Some Special Features in the Adjustment of Radio Measuring Instruments—Yu. S. Gavrilov,

A. V. Kelin, and V. M. Kriksunov

815 41

Optimal Matching of a Modulator to Measure Circuit Parameters—G. N. Rozhdestvenskii

and V. P. Fedorin

819 43

Precision shf Matching Transformer—G. G. Petrosyan

822 45

Stroboscopic Digital Slip Gauge—A. I. Pokatev

825 47

ACOUSTIC MEASUREMENTS

Instrument for Continuous Measurement of Intermodulation Distortions of Electroacoustic Systems

—A. N. Mutafi

828 48

Metrological Problems in Standardization of Scintillation Detectors—A. Ya. Berlovskii,

A. R. Daich, and Yu. A. Tsirlin

833 52

Measuring the Period of a Reactor—E. V. Armenskii, B. A. Zakharov, and A. M. Potekhin

836 54

Instrument for Measuring Seed Concentration—G. M. Kuznetsov, L. I. Evstyunina, N. G. Lebedeva, and L. P. Markova

838 55

ASSISTANCE TO MEASUREMENT LABORATORY WORKERS

Instrument for Analyzing Macroprofilograms of Cylindrical Parts—I. M. Tsoi, I. B. Gurvich,

N. A. Bokarev, and D. S. Verbovskii

842 58

Direct Voltage and Current Calibrator for Checking Instruments—R. I. Sheider, N. V. Pirozhkov, and V. A. Razumovskii

846 60

Use of the U302 Device for Checking Voltmeters and Wattmeters with a Measurement Limit of 600 V—N. I. Kotel'nikov

849 63

METROLOGICAL SERVICE

Improving the System for Inspecting the Condition of Measurement Equipment—A. A. Tsibina ..

850 63

Situation Concerning Organization of Checking Measurement Techniques—G. I. Rutman

854 66

Service of the Chief Metrologist—a Major Link in the Production Chain—Z. I. Druker

856 68

REPAIR OF MEASURES AND INSTRUMENTS

Attachment for Checking the Measuring Units of Magnetic Vacuum Gauges—O. D. Smirnov ...

858 69

ABSTRACTS

[Improved Absolute Methods for Calculating Neutron Sources (K. V. Geiger, Metrologia, No. 2, 1968)	71]
--	-----

[Absolute Determination of Resistance by Calculating Capacitance Standard (A. M. Thomson, Metrologia, No. 1, 1968)	73]
--	-----

DISCUSSIONS

Rational Conversion of a Continuous Quantity into a Discrete-Level Signal—N. M. Pidarin	862	76
---	-----	----

FROM THE HISTORY OF RUSSIAN METROLOGY

Ancient Russian Measures of Length—N. A. Shost'in	866	78
---	-----	----

INFORMATION

At the Committee of Standards, Measures, and Measuring Instruments, Council of Ministers of the USSR	871	82
--	-----	----

Meeting of Metrologists and Standardization Experts Active in Standards and Measurement Laboratories of the System of the Standards Committee in the RSFSR	873	84
--	-----	----

Session of the First Subcommittee of the "Surface Finish Quality" Technical Committee of the ISO—I. V. Dunin-Barkovskii	876	85
---	-----	----

Scientific Technical Conference "Automation of Optical Measurement and Coordinate-Reading Methods"—L. K. Gorelov, S. F. Korndorf, Yu. L. Polunov, and V. M. Rozhkov	877	86
---	-----	----

Publications of the Governmental Standards and Reference Data Service (GSSSD)—A. Titov . . .	881	88
--	-----	----

BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR

Standard Scales for Loading of 500 kg—V. S. Kolunov	883	89
---	-----	----

Estimation of Nonlinear Distortion by Means of a Frequency Characteristic Recorder—A. M. Mishin	884	90
---	-----	----

Table of Corrections to the Values of Transmitted Standard Carrier Frequencies	885	91
--	-----	----

Number 7, 1969

July, 1969

Meeting of the Active Members of the Committee of Standards, Measures, and Measuring Instruments' System	887	3
New State Standard for the Unit of Ionizing Radiations	892	7
New Reference Assembly for Measuring Magnetic Flux	897	11
One of the Basic Tendencies in the Automation of Testing—V. P. Tavrovskii	899	13

GENERAL PROBLEMS OF METROLOGY AND MEASUREMENT TECHNIQUES

Relationship between Speed of Operation and Precision of Measuring Transducers—Yu. S. Bykhovskii	903	16
--	-----	----

Effect on the Precision of Measurements of the Discrepancy between the Investigated Object and Its Model—V. Ya. Volodarskii, V. Ya. Rozenberg, and N. A. Rubichev	907	18
---	-----	----

Error in Measuring One-Dimensional Probability Distribution Functions of Random Processes—V. L. Banket	911	20
--	-----	----

LINEAR AND ANGULAR MEASUREMENTS

Spring-Loaded Instruments for Testing Dimensions and Displacements, and the Prospect of Their Development—Ya. M. Tseitlin	916	24
---	-----	----

Opticomechanical Waviness Recorder—B. M. Levin and G. V. Leont'eva	920	27
--	-----	----

Classification of Instruments and Devices for Measuring and Evaluating the Geometrical Quality Parameters of Machined Surfaces—V. Ya. Éidinov and V. S. Luk'yanov	925	30
---	-----	----

True Dimension in Linear Measurements—N. N. Markov and P. A. Satserdotov	929	33
--	-----	----

Determining the Lack of Coaxiality of Cylindrical Surfaces by Measuring Wobble, Taking Into Consideration Errors in the Shape—Z. F. Urazaev	933	36
---	-----	----

Method for Measuring Deviations from Linearity of the Cylindrical Surfaces' Generating Lines —R. A. Gol'man	937	38
OPTICOPHYSICAL MEASUREMENTS		
Instrument IKL-1 for Recording Spectral Line Contours—V. T. Goloborod'ko, A. P. Kirichenko, and L. P. Nemashkalo	940	40
Evaluating the Quality of Optical Surfaces by the Width of Interference Fringes —S. E. Evlasov	942	42
THERMOPHYSICAL MEASUREMENTS		
Possibility of Deriving a Temperature Scale by Means of the Absolute Optical Method —V. E. Finkel'shtein	944	44
Investigation of Errors in a Vanishing Filament Pyrometer—A. V. Kogan	947	46
Dynamic Method for Evaluating the Specific Heat of a Medium—B. S. Zalivadnyi	951	48
Evaluation of Thermal Capacity by the Differential Method—V. N. Popov	954	50
MEASUREMENTS OF ELECTRICAL AND MAGNETIC QUANTITIES		
Designing Null Detectors for Analog-Digital Converters of Scanning Test Systems—G. Lüzius ..	958	53
Impedance Meter with Autocompensation—B. I. Polivoda and A. P. Nasonov	963	57
Frequency Conversion with Automatic Phase Trimming of Multiple Frequencies by Means of the Radio-Pulse Method—V. I. Grigulevich, A. M. Ormuzd, and A. I. Podborskii. . . .	965	58
Multichannel Symmetrical Automatic Bridge—A. A. Kol'tsov, D. N. Karabanov, and M. G. Akhmadeev	969	61
Design of Differential Automatic Bridges—V. G. Belik and L. Z. Amlinskii	972	63
Possibilities and Limitations of Frequency-Balanced Four-Arm Bridges—V. Yu. Kneller and L. P. Borovskikh	978	66
Pulse Method for Measuring Capacitances and Resistances—O. A. Myazdrikov	983	68
Narrow Band-Elimination Filter—E. A. Nikitin and S. F. Kononov	986	70
Inductive Transducer with an Eddy-Current Effect—I. A. Limanov	989	72
ABSTRACTS		
[Generalized Theory of the Modified Normal Distributions (M. Romanowski, Metrologia, No. 2, 1968)		75]
[Comparator of Line Standards with a Photoelectric Microscope (K. Hoffrogge and Rummert, Metrologia, No. 2, 1968)		76]
[New Standard Manobarmeter of the Bureau International des Poids et Mesures (H. Bonhoure and J. Perrien, Metrologia, No. 2, 1968)		76]
[Accuracies of Calibration and Use of IPTS Thermocouples (T. P. Jones, Metrologia, No. 2, 1968)		77]
[Comparison between Gas Thermometer, Acoustic, and Platinum Resistance Temperature Scales between 2 and 20°K (J. S. Rogers et al., Metrologia, No. 2, 1968)		78]
[International Comparison of Standards of Mutual Inductance (A. F. Dunn and G. H. Royner, Metrologia, No. 2, 1968)		79]
[Role of Interferometry in Long-Distance Measurements (K. M. Baird, Metrologia, No. 3, 1968) ..		80]
ASSISTANCE TO MEASUREMENT LABORATORY WORKERS		
Calibration of a Balanced Thermistor Bridge Scale—A. V. Elin	994	80
Automation of the Testing of Commercial Radiation Pyrometers—V. D. Nikiforov, N. K. Emel'yanov, and T. F. Ushakova	998	83
Equipment for Testing DC Galvanometers—N. A. Akkuratnova	1002	85
METROLOGICAL SERVICE		
Basic Characteristics of Mass Servicing in Test Laboratories—G. N. Gokhberg and L. N. Zakashanskii	1003	86
Metrology in the Service of Quality—A. N. Dertev	1008	90

TRAINING OF PERSONNEL

Republican School for Raising the Qualifications of Standardizers and Metrologists

- V. P. Kochin. 1010 91

REPAIRS OF MEASURES AND INSTRUMENTS

Certain Problems of Specialization in Repairing Instruments-I. I. Paulyukonis,

V. A. Starosel'skii, and M. N. Khanin. 1013 93

Evaluation of the Complexity of Adjustment Work-A. V. Érvais 1017 96

INFORMATION

Results of the All-Union Socialist Competition for the First Quarter of 1969 1019 97

International Exhibition "Automation-69" 1021 98

Inspection Competition for the Best Organization in Supervising Measuring Equipment

- N. P. Slutskii and M. M. Silenko 1023 99

INTERNATIONAL COOPERATION

Committee-of-Standards Delegation in France-I. A. Almazov 1026 101

BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR

Optical Sighting Tube-A. E. Zaitsev 1028 102

Instrument for Measuring the Cross-Sectional Area of Objects with a Complex Shape

- V. N. Vydrin, L. A. Barkov, and V. V. Pastukhov. 1029 103

Effect of the Instability of Current-Collector Resistance on Torque Measurements

- N. I. Bokhan and A. M. Dmitriev. 1031 104

The Amplifying Properties of Ceramic Piezoids TsTS-19 in a Three-Component Electrostatic

Field-R. G. Dzhagupov, T. A. Melik-Shakhnazarov, and R. A. Yakubov 1034 106

Automatic Instrument for Measuring the Flow of a Coolant-E. A. Ganin, V. F. Levedev,

A. S. Raetskii, and V. A. Simonov. 1036 107

Corrections to the Carrier Frequencies of Radio Stations GBR and RES Obtained by Comparison

with the USSR State Standards of Time and Frequency 1038 108

Number 8

August, 1969

New Material and Technical Facilities for State Inspection Agencies of Standards

and Measuring Equipment-A. A. Berest 1039 3

INFORMATION AND MEASUREMENT SYSTEMS

Quasi-Multiplication Correlation Meter-V. P. Piastro, E. D. Koltik,

and R. V. Yaraloshvili 1048 10

Informational Evaluation of Analog-Digital Converters-V. A. Mikhailov and V. E. Tyrsa 1052 12

Validity of Applying Informational Characteristics to Methods and Means of Measurement

and Testing-I. E. Ribet' 1054 14

LINEAR AND ANGULAR MEASUREMENTS

Highly-Efficient Means for Testing Shapes (Review from Foreign Materials)

- O. D. Bychkov 1056 15

Automatic Measurements of Angular Spacings with an Indexing Roller-V. A. Truten' 1060 18

Technique for Plotting Base Circles in Mechanical Analyses of Roundness

- A. N. Avdulov, R. S. Guter, Yu. L. Polunov, A. N. Tabenkin, I. A. Faradzhev,

and V. G. Shuster 1064 21

Testing of Dilatometers of the DKV-1 and Chevenard Types-I. I. Lifanov,

N. G. Sherstyukov, L. N. Churilov, L. N. Evgen'eva, and A. I. Kolbasnikova 1068 23

OPTICOPHYSICAL MEASUREMENTS

Determination of Photometric-Scale Errors in Infrared Spectrophotometers-S. L. Yudina,

M. A. Kryaglyakova, and N. I. Afanas'eva 1071 25

Double-Beam Oscillographic Meter IPL-2 of Luminous Radiation Pulses—Yu. A. Drozhbin, D. F. Korinskii, V. V. Blinov, V. A. Nefed'ev, I. V. Lyapin, V. M. Andreev, and Yu. A. Akimov	1075	27
Measurement of Gas-Laser Active-Medium Gain—M. M. Drozdov and V. I. Matveev	1078	29
MECHANICAL MEASUREMENTS		
Measuring the Lack of Coincidence in Transient Rotations of Kinematic Elements —L. K. Shrago, N. S. Polyakova, B. I. Peschanskii, and L. A. Sribner	1080	30
LIQUID AND GAS FLOW MEASUREMENTS		
Physical Foundations for Measuring Flows by the Constriction Method—N. Yu. Nemtsov	1083	32
THERMOPHYSICAL MEASUREMENTS		
New International Practical Temperature Scale IPTS-68—M. P. Orlova	1087	34
Thermoelectric Properties of Niobium-Tantalum and Niobium-Zirconium Alloys —I. P. Druzhinina, A. A. Fraktovnikova, and T. M. Vladimirskaia	1090	36
Contactless Measurements of the Temperature of Titanium-Alloy Billets during Radiation Heating—L. A. Zernov	1094	38
MEASUREMENTS OF ELECTRICAL AND MAGNETIC QUANTITIES		
Selection of the Physical Characteristics and Instrument Transducer for Continuous Process Testing—L. M. Shapiro	1097	40
dc Energy Counter Based on a Magnetotransistor Converter—N. G. Semenko and A. G. Shestakov	1102	43
Highly Sensitive Null Detector—V. S. Gur'yanov and I. Ya. Klebanov	1107	46
Error in Measuring Effective Voltages with a Quasi-Linear Detector—L. I. Volgin	1109	48
Particular Features in Measuring High-Permeability Permalloy Specimens —Yu. A. Pimenov and Yu. M. Gertman	1114	51
Errors of Digital Frequency Markers—A. S. Gur'evich	1117	52
Evaluating Parameters of Magnetostriction Transducers—P. P. Chervinskii	1121	55
Measurement of the Permittivity of Films—Yu. V. Kuznetsov	1124	56
Effect of High-Temperature Annealing on the Parameters of Y(xy)-Cut Quartz Bars —V. F. Lubentsov and L. A. Shustrova	1127	58
RADIATION MEASUREMENTS		
Stiffness Trends of a Human Radiations Spectrometer—V. S. Yuzgin	1129	60
PHYSICOCHEMICAL MEASUREMENTS		
Testing of the Permittivity-Type Oil-Moisture Meters—V. E. Melkumyan, I. Yu. Klugman, and N. B. Kovylov	1132	62
ASSISTANCE TO MEASUREMENT LABORATORY WORKERS		
Computation of Loads for Free-Piston High-Pressure Manometers—M. E. Balashov and G. I. Loskutov	1135	65
Testing of MO-62 Bridges—M. L. Sviderskii	1140	68
Testing of Scales and Weights in Situ—P. V. Rudenko and L. N. Strel'tsov	1142	69
METROLOGICAL SERVICE		
Criterion of the Efficiency of Test Laboratories as Mass Servicing Systems —L. N. Zakashanskii	1143	70
Working Methods for State Inspection in Engineering (A Subject for Discussion) —L. M. Elenin, S. A. Kaplan, and E. G. Kurzner	1149	74
Automation Service and Metrological Problems—S. S. Granat	1155	78
Central Measurement Laboratory of a Plant—V. K. Pospelov	1159	81
Provision of Spare Parts for Electrical Measuring Instruments—V. M. Kondratenko	1161	82

INFORMATION

Equipment for Linear and Angular Measurements at the International Exhibition "Avtomatizatsiya-69"—M. G. Boguslavskii and Ya. M. Tseitlin	1163	84
Japanese Measurement-Equipment Exhibition in Novosibirsk—A. F. Kotyuk	1166	86

ABSTRACTS

[The Manner in Which Progress Is Made in the Standards for Physical Measurements (J. Terrien, Metrologia, No. 4, 1968)	86]
[Compensation for Linear Thermal Expansion (K. M. Baird, Metrologia, No. 3, 1968)	87]
[Investigation of the 605.8-nm Line Emitted by a Microwave Excited Kr-86 Lamp (W. R. S. Rowley and L. Ward, Metrologia, No. 3, 1968)	88]
[Time Scales (L. Essen, Metrologia, No. 4, 1968)	88]
[A Flame as a Primary Standard of Temperature (W. Snelleman, Metrologia, No. 3, 1968)	89]
[A Flame as a Secondary Standard of Temperature (W. Snelleman and J. A. Smit, Metrologia, No. 3, 1968)	89]
Corrections Applied to the Carrier Frequencies of the Radio Stations GBR and RES According to the USSR State Standard of Time and Frequency	1167 91

Number 9 September, 1969

Role of the Measurable Properties of the Elements in the Discovery and Development of the Periodic Law of D. I. Mendeleev—B. M. Kedrov	1169	3
Periodic Mendeleev System and Atomic Weights (Masses)—I. P. Selinov	1176	9
D. I. Mendeleev—a Great Russian Metrologist—V. O. Arutyunov	1182	13
Russia's Checking Service and Its Development after the Great October Socialist Revolution —N. K. Ashcheulov	1187	17
Part Played by D. I. Mendeleev in the Development of Research into Refining the Physical Constants—S. V. Gorbatsevich	1192	21
Theory of Balances and Accurate Weighing in the Investigations of Mendeleev and Later Developments—L. K. Kayak and N. A. Smirnova	1197	25
Metrological Work of D. I. Mendeleev in the Field of Pressure and Density Measurements —N. A. Gaevskii, E. F. Dokinskii, and L. P. Stepanov	1202	28
Development of Temperature Measurements in the Central Bureau of Weights and Measures and in VNIIM—G. S. Ambrok and I. I. Kirenkov	1207	31
Questions of the Accuracy of Construction and Transmission of the International Practical Scale of Temperature—V. V. Kandyba	1211	34
Metrological Investigations in Thermochemistry and Thermophysics—B. N. Oleinik, O. A. Sergeev, and V. D. Mikina	1216	38
State and Development of Metrological Operations in the Domain of Electrical and Magnetic Measurements—E. G. Shramkov, T. B. Rozhdestvenskaya, and E. N. Chechurina	1223	42
Works of the Main Bureau of Weights and Measures in Photometry and Their Development to Date—V. E. Kartashevskaya	1230	47
Development of D. I. Mendeleev's Ideas in the Area of Measurements in Medicine and Biology—R. S. Dadashev and V. B. Parashin	1235	51
Nuclear Standard Measures—B. S. Dzhelepov	1242	56
Cybernetic Methods and the Means of Computer Technique in Metrology—G. P. Zedginidze	1249	61
Metrology and Analytical Chemistry—A. B. Shaevich	1254	65
Periodic Law of D. I. Mendeleev and the Transuranic Elements—M. F. Yudin	1257	66
Value of D. I. Mendeleev's Works in the Study of Gas Properties—D. K. Kollerov	1260	69
High-Accuracy Measuring Instruments at the "Automation-69" Exhibition—P. P. Arapov	1262	70

Calculation of the Reliability Characteristics of Certain Systems for Monitoring Operating Capacity—É. A. Loginov and F. Yu. Chel'kis	1268	75
Method and Algorithm for Plotting Calibration Curves of Electron Multipliers —S. A. Alekserov, L. I. Andreeva, M. M. Gel'man, and B. M. Stepanov	1273	77
Calculating the Average Value of a Voltage Rectified from any Waveform—L. I. Volgin	1277	80
Four-Element Circuits for Decade Resistances and Capacitances with Rotary Switches —Yu. Bartosh	1280	82
Equivalent Circuit and Calculation of an Electrical Circuit Having Strong Inductive Coupling —L. N. Tavdgridze and N. G. Lobzhanidze	1284	85
METROLOGICAL SERVICE		
Some Problems in Organizing Metrological Quality Control and Industrial Product Reliability—V. F. Bakhmutskii and I. I. Dudich	1295	91
ASSISTANCE TO MEASUREMENT LABORATORY WORKERS		
Device for Checking Electrostatic Kilovoltmeters—G. G. Stepanenkov, I. V. Khakhamov, and O. K. Kaplin	1300	95
Answer to a Reader's Question	1304	97
INFORMATION		
In the Committee of Standards, Measures, and Measuring Devices of the Council of Ministers of the USSR	1305	98
Back-Connected Digital Measuring Instruments—Yu. V. Ivanov	1309	100
Seminar on Polarimetry and Saccharimetry—E. A. Volkova and G. I. Kaminir	1311	101
All-Union Seminar "Color, Standards, and Color Measurements"—G. I. Kaminir and E. N. Yustova	1313	102
BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR		
Introduction of Standards for Weights—S. M. Ageev and M. I. Tyutikova	1315	103
Tachymeter for Measuring Subterranean Structures—G. S. Salishchev	1317	105
Effect of Cable Resistance on the Sensitivity of a Tensiometric Channel —S. G. Simonyan and V. G. Medvedev	1319	107
Amplifying Element of TsTS-19 Piezoelectric Ceramic—R. G. Dzhangupov, R. A. Yakubov, and T. A. Melik-Shakhnazarova	1321	108
Corrections to the Values of Transmitted Standard Carrier Frequencies	1323	109

Number 10 October, 1969

Conditions and Prospects of Work on Standard Specimens—A. B. Shaevich	1325	3
GENERAL PROBLEMS OF METROLOGY AND MEASUREMENT TECHNIQUES		
Determining the Dynamic Characteristics of Linear Measuring Systems —D. I. Bashaleishvili	1330	6
Opticomechanical Analog-Digital Precision Transducer—V. A. Tulin	1336	9
LINEAR AND ANGULAR MEASUREMENTS		
Operating Speed of DFM Transducers in Control and Sorting Automatic Machines —É. L. Abramzon and V. L. Gabinov	1341	12
Instrument for Measuring the Deviation Angles of Streaks in Vertical Shafts —B. I. Timofeev, B. G. Smirnov, and M. N. Galinskaya	1344	14
MASS MEASUREMENTS		
Standard on "General-Purposes Lever Balances. Upper Weighing Limits. Precision Norms"—S. I. Gauzner, V. G. Solov'ev, S. P. Nemeshaev, and L. S. Pavlycheva	1347	16

Compensation of Dial-Balance Errors Contributed by Loose Weights—V. A. Bocharov	1351	18
Weight-Testing Car for 150 Tons—V. A. Koval', A. L. Vasserman, A. A. Mindin, and Ya. A. Shlemovich	1355	20
Metrological Certification of the Weighing of Moving Cars—E. I. Perel'man	1357	21
MECHANICAL MEASUREMENTS		
Application of Pressure Transducers Subjected to Large Vibrations—I. I. Mil'shtein, V. N. Pines, A. E. Zhukovskii, and G. A. Terekhov	1360	23
LIQUID AND GAS FLOW MEASUREMENTS		
Precision in Measuring the Flow and Quantity of Fluids—P. P. Kremlevskii	1364	25
THERMOPHYSICAL MEASUREMENTS		
Methods and Means for Calibrating Surface Temperature Transducers —V. I. Lakh, R. A. Portak, and B. I. Stadnyk	1368	28
Stability of Tungsten-Rhenium Thermocouples VR 5/20 and VR 10/20 in the Range 1450-2000°C—L. D. Oleinikova, P. P. Oleinikov, and L. I. Trakhtenberg	1373	31
Pulse Method for Determining Thermal Diffusivity of Poor Heat Conductors —B. N. Egorov and V. S. Kileso	1375	33
Automatic Compensation of the Ambient Temperature Effect on the Thermal emf of Total Radiation Pyrometers—L. A. Charikhov	1378	35
MEASUREMENTS OF ELECTRICAL AND MAGNETIC QUANTITIES		
Calibrators for Testing dc Ammeters and Voltmeters—R. I. Shneider	1382	37
Natural Fluctuations of Galvanometer Moving Parts—E. A. Troitskii	1387	41
Devices for Subtracting Two Pulse Sequences—V. D. Tsidelko, L. S. Sitnikov, and L. L. Utyakov	1390	43
Automatic Installation for Measuring the Distribution of Resistance in Metals and Semiconductors—L. L. Silin, A. Ya. Terekov, and V. V. Tipikin	1393	45
Selection of a Low-Pass Filter for an Analog Correlator—A. N. Denisenko	1396	47
Method for Determining Experimentally the Mean Phase-Propagation Velocity in the VLW Range—A. G. Fleer and A. M. Moroz	1400	49
Error of the R-2R Code-to-Voltage Converter with a Reference Voltage Source —A. E. Shirochenskii	1404	52
Determining Electrical Parameters of Dielectric Double Layers—V. S. Andreev and N. I. Petrov	1411	56
Galvanometer for Measuring Very Small Currents—P. F. Shakurov	1414	58
ACOUSTICAL MEASUREMENTS		
Impedance Method for Measuring the Radiation Power of Ultrasonic Crystal Transducers—A. Ya. Snytko	1417	60
RADIATION MEASUREMENTS		
Dosimetric Characteristics of LiF Monocrystals—K. M. Kudelin, V. B. Bulgakov, and A. A. Lebedev	1421	62
ASSISTANCE TO MEASUREMENT LABORATORY WORKERS		
Measurement of Deviations from Cylindricity—V. Ya. Britvan	1424	64
Low-Temperature Pyrometer—I. M. Korobko, V. K. Egorov, and A. N. Lysenko	1426	65
Method for Calibrating Copper-Constantan Thermocouples at Negative Temperatures by Means of the Boiling Point of Water—A. P. Bondareva	1428	67
Testing the Temperature of Linear Accessories' Blanks in a Heating Equipment —V. E. Derevyanko	1431	69
METROLOGICAL SERVICE		
Hiring of Instruments—L. M. Elenin and S. A. Kaplan	1432	69
Supervision of Testing Means—M. A. Adadurova	1437	72

REPAIRS OF MEASURES AND INSTRUMENTS

Organization of Centralized Repairs of Linear and Angular Measuring Equipment in Engineering—P. A. Nikritin, M. B. Smulakovskii, and P. I. Guzhvinskii	1440	74
Organizing the Repairs and Testing of Measuring Equipment in Rural Areas of Lithuania—V. F. Latushkin	1443	76

INTERNATIONAL COOPERATION

Extension of Scientific and Technical Cooperation in the Field of Metrology between the USSR and the GDR—O. A. Kostenko	1444	76
---	------	----

INFORMATION

Results of the All-Union Socialist Competition for the Second Quarter of 1969	1447	78
Electrical Measuring Instruments at the "Avtomatizatsiya-69" International Exhibition—M. Kh. Shliomovich	1449	80
Digital Measuring Devices at the "Avtomatizatsiya-69" International Exhibition—M. M. Gel'man	1452	82
In the Metrological Institutes	1457	85
Resolution of the Presidium of the All-Union Central Council of Trade-Unions (VTsSPS). Drawing the Attention of Trade-Union Organizations to the Problems of Raising the Quality of Production—A. Shelepin	1466	91
For the Attention of all Members of Trade-Union Amateur Moving-Picture Studios and Clubs, as well as Houses and Places of Culture and All Amateur Movie-Makers of the Soviet Union—Berg, P. Fedosov, V. Tkachenko, and A. Samarin	1468	92
A. D. Nesterenko (On His 70th Birthday)	1470	93

BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR

Wide-Range Electropneumatic Measuring System—V. S. Moiseev and A. V. Fedotov	1472	94
Improving the Design of the Type KSh Pitch Gauge—Yu. A. Fedukin	1474	95
Method for Determining the Actual Contact Area of Surfaces under Prolonged Static Loading at High Temperatures—V. M. Popov	1476	96
Possibility of Using Unstabilized Gas Lasers in Double-Beam Interferometers—V. M. Khavinson, L. F. Laricheva, and Yu. P. Efremov	1478	97
Optimization of the Optical Characteristics of Interference Filters—Yu. V. Sal'nikov and A. V. Lobofov	1481	99
High-Sensitivity Temperature Transducers for Multichannel Digital Systems—A. A. Bokrinskaya, V. V. Komlik, and V. Ya. Sirchenko	1483	100
Technique for Measuring Heat Exchange in Rapid Processes—Yu. A. Polyakov	1485	101
Highly Stable High-Voltage Source—A. Ya. Severinskii	1488	102
Film Piezoelectric Transducers for Reference Delay Lines and Solid-State Amplifiers—F. L. Vizen	1490	104
Measurement of Electrical Field Potentials by the Sato Probe Method—Yu. S. Bortnikov and V. I. Chaplii	1493	105
Instrument for Measuring the Percentage Content of Nitrobenzene in Aniline—V. G. Rogalev, A. G. Il'in, A. M. Degryarev, and G. D. Kazantsev	1495	106

NECROLOGY

Pavel Borisovich Usatin—A Group of Colleagues	1498	108
Corrections Applied to the Carrier Frequencies of the Radio Stations GBR and RES According to the USSR State Standard of Time and Frequency	1499	108

GENERAL PROBLEMS OF METROLOGY AND MEASUREMENT TECHNIQUES

Analyzing Interpolation Errors of Output Signals from Linear Dynamic Systems—V. E. Borzykh and L. T. Milov	1501	3
Application of Magnetic Recording Systems in Measuring and Transmitting Reference Signals—A. T. Dyuzhin and Yu. A. Makhov	1505	5

LINEAR AND ANGULAR MEASUREMENTS

Instruments for Testing the Kinematic Error of Gears—A. Ya. Idelevich	1508	6
Sensitivity of Photoelectric Scanning Devices for Angular Displacements of the Slot with Respect to the Recorded Object—S. P. Éskdn	1512	9
Certain Particular Features of Measurements with Lever Gauges and Micrometers—V. N. Zimin and G. B. Kainer	1516	11

OPTICOPHYSICAL MEASUREMENTS

Certain Design Peculiarities of Thermoelectric Power Meters in the Optical Range—V. S. Sollogub	1519	13
---	------	----

MASS MEASUREMENTS

Methods for the Automation of Beam Balances—V. L. Shinkarenko	1525	16
---	------	----

THERMOPHYSICAL MEASUREMENTS

Small-Temperature-Deviation Meters—V. I. Kostenko, P. E. Stadnik, and V. N. Zvyagintsev ...	1532	21
Developing New Types of Thermocouple Jackets with a Higher Resistance to Bending Stresses—A. B. Kamenetskii and N. V. Gladkaya	1536	24

MEASUREMENTS OF ELECTRICAL AND MAGNETIC QUANTITIES

High-Resistance Simulator for Testing Teraohmmeters—L. V. Dzyubenko and A. M. Ilyukovich ..	1541	27
Design of Optimal Measuring Coils for Magnetic Measurements—G. M. Naishuler	1544	29
Design for a Hall-Transducer Magnetic System—A. M. Arakelyan, V. I. Saakov, and M. M. Mkhitarian	1548	31
Methods for Measuring Dielectric Absorption of Capacitors—Yu. A. Tarasov	1552	33

PHYSICOCHEMICAL MEASUREMENTS

Analysis of Dynamic Errors in Automatic Absorption Meters and Refractometers—Yu. I. Komrakov, M. A. Karabegov, I. V. Devdariani, and G. A. Simonyan	1555	35
Diffusion Batchers of the Vapors of Liquids—D. K. Kollerov and K. D. Mgaloblishvili	1561	39

RADIATION MEASUREMENTS

Evaluating the Stopping Power of Air for α Particles by Means of Semiconductor Detectors—B. M. Isaev, N. P. Podenko, and É. K. Stepanov	1566	42
--	------	----

ASSISTANCE TO MEASUREMENT LABORATORY WORKERS

Modernization of the DS1 and DS11 Flowmeters—D. V. Mishchenko	1569	44
Testing Mercury Differential Manometers Provided with a Separating Liquid—L. V. Pylypyuk ...	1571	45
Measuring the Surface-Layer Temperature of Rolling-Mill Rolls—A. A. Zgura, V. F. Frolov, and N. N. Oksamitnyi	1575	47
Testing High-Value Resistance Boxes of Types R403, R404, and R405—A. I. Petukhov	1577	48
Combined Method for Measuring High-Resistance Potentiometers—V. A. Kochan and D. E. Marunchak	1579	49
Expanding the Relative Measurement Range of a Ratiometer—L. L. Tkachev	1582	51

METROLOGICAL SERVICE

Innovations in the Organization of the State Inspection of Measuring Equipment in the Moldavian SSR—V. A. Losyatinskiy	1584	52
Application of Metrology to Medicine—V. A. Shchegolikhin	1586	53
Improving the Metrological Service Organization of Enterprises—A. I. Pobezhimov	1587	54

QUALITY AND RELIABILITY OF GAUGES AND INSTRUMENTS

Stage for "Elimination of Error Sources"—Ya. M. Sorin	1588	54
---	------	----

ABSTRACTS

[New Method of Pressure Calibration up to 10,000 bars (K. Yasunami, Metrologia, No. 4, 1968)	56]
[Long-Term Stability and Performance of Platinum Resistance Thermometers for Use up to 1063°C (D. J. Curtis and G. J. Thomas, Metrologia, No. 4, 1968)	57]
[Precise Measurement of Rectangular Coils to be Used in a Determination of the Gyromagnetic Ratio of the Proton (P. J. Sim and R. J. Taylor, Metrologia, No. 4, 1968)	58]
[International Comparison of Measurements of Irradiance (R. E. Bedford and S. K. Ma, Metrologia, No. 3, 1968)	59]
[Systematic Error in $4\pi\beta$ - γ Coincidence Measurements (A. Williams, F. S. Hughes, and P. J. Campion, Metrologia, No. 4, 1968)	60]

CRITICAL REVIEWS

Mathematics in Physics—L. N. Al'perin	1591	61
---	------	----

REPAIRS OF MEASURES AND INSTRUMENTS

Mechanizing the Repair of Sliding Calipers and Micrometers—V. A. Starosel'skii and S.-A. O. Aliev	1594	63
Attachments for Repair Work—V. N. Gartman and R. M. Lishanskii	1597	64
Attachment for Repairing Rotatable Indicating Heads Type IIGM—A. L. Stepanov and P. I. Kudryavtsev	1599	65
Determining the Quantity of Spare Parts Required for the Servicing and Repairs of Measuring Equipment—O. V. Kamenskii	1601	66
Repairs of Thermotechnical Testing and Measuring Instruments—V. P. Ivashchenkov	1603	67

PROBLEMS OF INDUSTRIAL PSYCHOLOGY

Necessity for an Industrial-Psychological Appraisal of Measuring Equipment—F. S. Pinskii	1604	68
---	------	----

INFORMATION

VNIIEK is Preparing for the Hundredth Anniversary of V. I. Lenin's Birth	1606	69
Soviet Instruments Intended for Testing and Regulating Technological Processes and Shown at the "Avtomatizatsiya-69" Exhibition—L. M. Magid	1609	71
Exhibition of Hungarian Measuring Equipment for Communications and Medicine—L. M. M. ..	1613	73
Fiftieth Anniversary of the Polish Weights and Measures Service—V. V. M.	1617	75
Seminar Entitled "Raising the Efficiency of Supervising Measuring Equipment in the USSR"—L. S. Fedotova and T. M. Épshtein	1619	76
Station RES Changes Its Nominal Carrier Frequency—G. N. Palii	1621	78
From the Journal "Pribory i Sistemy Upravleniya" (Instruments and Control Systems)—V. A. Ivanova	1622	78
In the Metrological Institutes (Brief Information on Certain Completed Work)	1624	79
N. I. Tyurin (On His 70th Birthday)	1631	84

BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR

Measuring the Thickness of Water Films with Surface Measuring Capacitors—V. A. Golovin ...	1632	85
Evaluating the Length of a Piezoelectric Transducer's Cable Line—B. O. Irashin	1635	86
Reference Equipment for Measuring Capacitance and Inductance at Frequencies up to 100 MHz—É. A. Abrosimov, N. A. Lazareva, and O. Ya. Maloshenko	1638	88
Device for Linearizing the Magnetic Fields of Electromagnets—R. D. Motsonashvili, V. V. Dadeshidze, and T. A. Khananashvili	1640	89
Evaluating the Parameters of Power Transistors—G. G. Solovskii	1643	91
Corrections to the Carrier Frequencies of the Radio Stations GBR and RES According to the USSR State Standard of Time and Frequency	1644	91

NECROLOGY

Konstantin Borisovich Karandeev	1645	92
---------------------------------------	------	----

Number 12 December, 1969

Long-Distance Comparison of Measures and Measuring Apparatus—A. I. Vasil'ev, Yu. P. Drobyshev, A. F. Kotyuk, and A. G. Fleer	1647	3
Information-Energy Figure of Merit of Broadband Instruments—É. F. Roose	1652	6
INFORMATION MEASUREMENT SYSTEMS		
Transducer of the Magnetic Modulation Type with a Shaped Magnet—V. G. Zhiron	1657	9
LINEAR AND ANGULAR MEASUREMENTS		
Conventional Symbols for Measurement Diagrams for Inspection of Linear Dimensions, Shapes, and Relative Locations of Surfaces—I. M. Berklaide	1659	10
Estimating the Radius of Curvature of a Profilometer Probe by Means of Specimens with a Regular Triangular Profile—V. S. Luk'yanov and N. A. Tabachnikova	1667	17
Photoelectric Method for Measuring Small Changes in Phase Difference in Interference Apparatus —I. Sh. Étsin	1673	20
Ultrasonic Ranging in Air—G. E. Rudashevskii and A. A. Gorbatoe	1675	21
OPTICOPHYSICAL MEASUREMENTS		
Review of Methods of Scanning Lined Objects by Means of Slit Systems—A. V. Novikov	1679	24
Ponderomotive Meter of Laser Output Energy Characteristics—N. G. Kokodii and R. A. Valitov ..	1684	27
LIQUID AND GAS FLOW MEASUREMENTS		
System for Compensating the Dynamic Errors of Thermal Flow Meters—P. A. Korotkov, G. A. Sokolov, and V. S. Polevoi	1689	30
THERMOPHYSICAL MEASUREMENTS		
Temperature Scale of the All-Union Scientific-Research Institute for Physicotechnical and Radiotechnical Measurements (VNIIFTRI) in the Range 4.2 to 20°K—D. N. Astrov, M. P. Orlova, and G. A. Kytin	1693	33
Pressure Dependence of the Indications of a Platinum Resistance Thermometer —A. A. Tarzimanov and V. S. Lozovoi	1698	36
Approximation of the Temperature Dependence of the Spectral Emissivity of Refractory Metals and Alloys—V. A. Vertogradskii	1701	38
Boundary Properties of Oblique-Layer Heat-Flux Detectors—O. A. Gerashchenko	1703	39
MEASUREMENTS OF ELECTRICAL AND MAGNETIC QUANTITIES		
Contemporary Status of Calibration and Checking Technology for Field Strength Meters and Measuring Antennas—V. S. Buzinov	1706	41
Sample Device for Checking Instruments Measuring Coefficients of Amplitude Modulation —V. A. Belikov, A. S. Solyanik, V. S. Klimashevskii, B. G. Seredenko, and A. M. Nazarenko	1714	46
Methods for and Errors in Frequency Measurements for Difference Oscillations —V. F. Lubentsov	1718	48
Apparatus for Measuring the Magnetic Induction of a Field at 4.2°K—Yu. G. Agbalyan, Yu. I. Kazantsev, E. N. Lysenko, N. M. Noginova, and G. K. Yagola	1723	51
Pulse-Operated Inductive Converter—G. I. Peredel'skii	1726	53
Time-Pulse Measurement of the Inductance of Iron-Free Coils—A. G. Ryzhevskii, L. P. Kropacheva, Yu. P. Kirin, and A. A. Vdovichenko	1730	55
Investigation of a Method of Converting Voltage into Code—V. P. Tarasov	1735	58
Tuning and Checking of Devices for Automatic Control of the Non-Uniformity of Telephone Response Characteristics—A. G. Rozin	1741	62
PHYSICOCHEMICAL MEASUREMENTS		
Method for Comparing the Calibration Characteristics of Moisture Meters—E. S. Krichevskii ...	1744	63

QUALITY CONTROL

- Indicators for the Statistical Control of Machined Piece Parts - V. M. Glukhikh 1751 68

ASSISTANCE TO MEASUREMENT LABORATORY WORKERS

- Evaluating the Reliability of Measurement Results - B. S. Dubov and N. M. Kopytin 1755 70

METROLOGICAL SERVICE

- Determining the State of Measurement Apparatus during Its Use - R. K. Bronyukaitis 1759 72

REPAIRS OF MEASURES AND INSTRUMENTS

- Economic Efficiency of Specialized Instrument Maintenance (Practical Experience of the Vilna Plant "Matas") - V. A. Starosel'skii and M. N. Khanin 1762 74

INTERNATIONAL COOPERATION

- Cooperation between the Metrologists of the Member Countries of COMECON
- S. A. Zavidonova and A. A. Sokolov 1766 76

INFORMATION

- Committee of Standards, Measures, and Measuring Devices of the Council of Ministers of the USSR 1769 78

- Soviet Electrical Measuring Instruments at the International Exhibition "Automation-69"
- L. M. M. 1772 80

- Information Collecting and Processing Machines at the Exhibition "Automation-69"
- M. M. Gel'man 1776 82

- At the Metrological Institutes (Brief Information on Completed Work) 1781 85

- E. G. Shramkov (His 75th Birthday and 50th Anniversary of His Scientific and Pedagogical Activity) 1787 90

BRIEF COMMUNICATIONS AND LETTERS TO THE EDITOR

- Proficorder Study of Vibratory Ball-Burnished Surfaces - Ya. S. Fel'dman and A. N. Kravtsov ... 1789 91

- Calculation of the Dynamic Error in Variable Level Flowmeters - M. P. Sal'nikov 1791 92

Modernized Cryostat for the VNIIM DIN-3 Interference Dilatometer - A. N. Amatuni

- and E. B. Shevchenko 1793 93

- Pneumatic Device for Measuring Displacements of Rough Surfaces - T. Ya. Gorazdovskii 1795 94

- Selection of Parameters for a Potentiometric Circuit and Bridge with Nonlinear Elements
- G. R. Solov'eva 1796 95

- Corrections to Carrier Frequencies of the Radio Stations GBR and RES with Respect to the USSR State Time and Frequency Standard 1798 96

- ERRATA 1799 35

INDEX

- Author Index, Numbers 1-12, 1969 1803

- Tables of Contents, Numbers 1-12, 1969 1809

NOTE

The Table of Contents lists all material that appeared in the original Russian journal. Items originally published in English or generally available in the West are not included in the translation and are shown in brackets. Whenever possible, the English-language source containing the omitted items is given.

